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JOURNAL of the Mississippi STATE MEDICAL ASSOCIATION

VOLUME I

January-December, 1960

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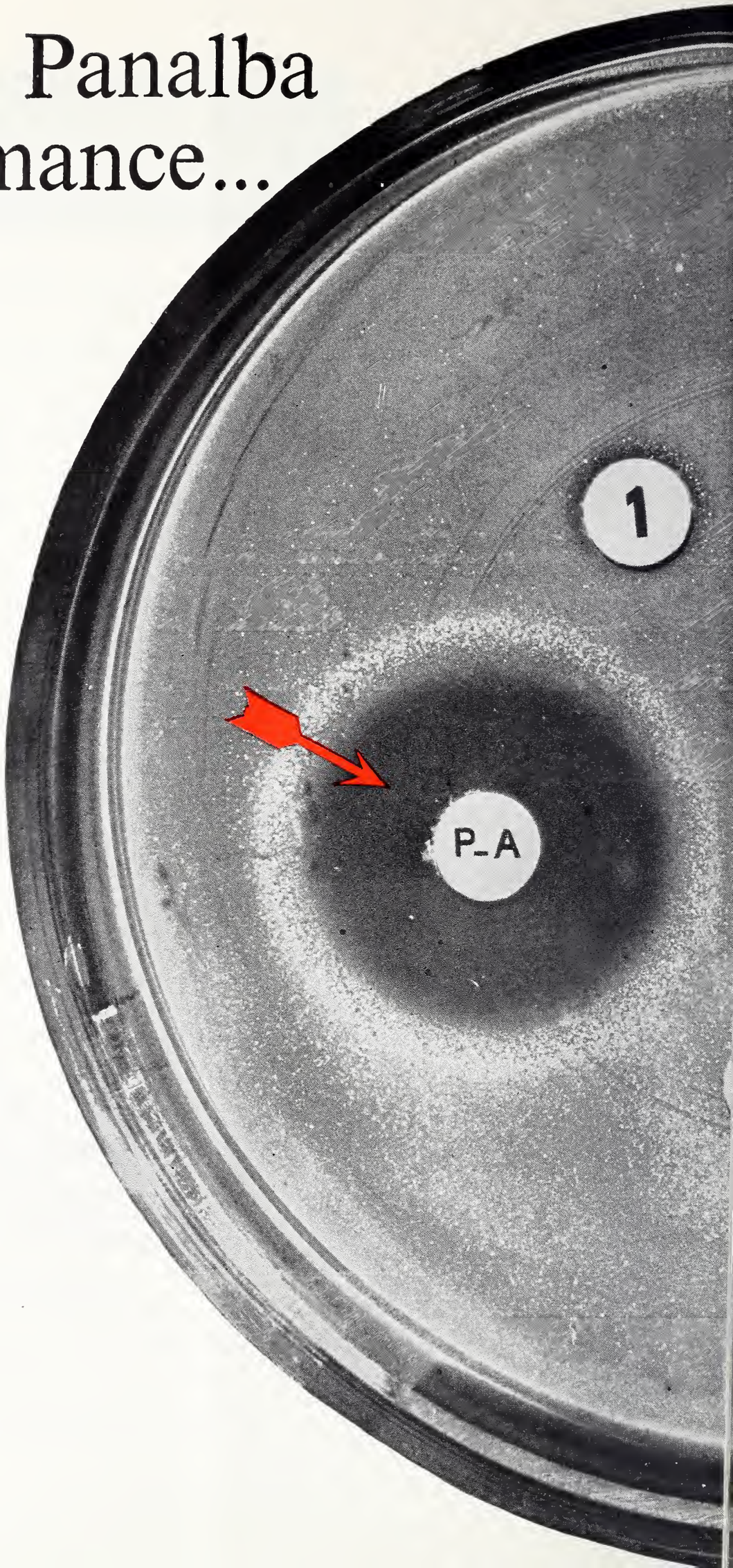

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NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION
JACKSON, MISSISSIPPI

January 1960

Dear Doctor:

Within the week the new Legislature convenes in regular session facing what Capitol Hill observers call the biggest money headache yet. Budget Commission's recommended $262-millions for 1960-61 biennium is 16% more than current appropriations. State Board of Health is slated for $1-million increase.

Some good medical legislation can be expected early in session with stress on indigent care improvement. Workmen's compensation will be up for tightening and some are predicting trend toward more federal funds for welfare. Early days of session will see heavy introductions and development of new administration's program.

California's new "Good Samaritan" law guarantees professional liability immunity to physicians in most first aid situations. The sensible statute says no physician "...who in good faith renders emergency care shall be liable for any civil damages as a result of any acts or omissions..." at accident scene.

Benefit payments to Americans under commercial health insurance plans may hit $3-billions when final 1959 figures are in. Underwriting companies report over $1-billion paid to hospitals, slightly less to physicians, and remainder as loss-of-income benefits. Policy holders are evenly divided among those who had no claims last year, those with one claim, and those having had a claim any time in last five years.

Two Mississippi physicians have received top drawer appointments to 1960 decennial U.S. Pharmacopceial Convention. Dr. H. H. McClanahan, Columbus, MSMA's Board of Trustees chairman, was named delegate and Dr. Raymond F. Grenfell, Jackson internist, is alternate. McClanahan was also nominated for USP Committee on Scope and Revision.

Henceforth, Newsletter in new abbreviated format will be tucked in front pages of Journal MSMA. Periodic but unscheduled newsletter-type publications will be limited to legislative and other one-time issues.

Happy healthy New Year,

Rowland B. Kennedy
Executive Secretary

DATELINE - MEDICAL AMERICA

Civil Service Hikes Federal Physicians' Pay

Washington - Non-military government career medical officers received salary increases to top-of-grade levels as 19 federal agencies employing physicians recently moved to overcome "competitive disadvantages" with private practice and business firms. New rates jump pay ranges from old $7-15,000 brackets up to $8-16,000 with new appointees authorized higher starting salaries. Government reports "excessive vacancies" and poor recruitment prospects.

Blue Cross Executive Favors Plan Reorganization

Cleveland, Ohio - Bad organization, splinter plans, benefit disparities, and decline of internal energies are reasons for Blue Cross' failure "...to enjoy the great sustaining power of mass membership." So says John R. Mannix, executive vice president of Northeastern Ohio plan, who advocates a single, national "monolithic" Blue Cross program. A believer in service benefits, Mannix wants prepayment organizational amalgamation of medical, dental, and hospital associations for better contracts.

Court Upholds Doctor's Refusal To Testify As Expert

Los Angeles - A California appeals court ruled that physicians cannot be forced to appear against their wishes as expert medical witnesses nor can such refusal become actionable. Decision came from a suit filed against three Los Angeles physicians following a professional liability trial where they declined to appear at the plaintiff's request. Ruling significantly states that a doctor having no relationship with a plaintiff growing out of an agreement to render care similarly has no duty to furnish expert witness service. Citation is Agnew v. Parks, 343 P 2d 118 (Calif. Aug. 10, 1959).

AMA To Sponsor Southern Conference On Aging

Chicago - Site of AMA's next regional conference on aging will be New Orleans where interested groups from Arkansas, Louisiana, Mississippi, and Texas will meet February 17-18 at Hotel Roosevelt. Wide scope program will include medical, social, economic, and religious aspects of aging. MSMA will have program participants.

Seniors' Hospital Admission Rate And Stay Not Excessive

New York - New study findings just released by Metropolitan Life Insurance Company show total annual hospital admission rate per 1,000 of only 156 for men and 98 for women over age 60 in United States. Length of stay varies with illness but women's stay is appreciably longer than that for men. Average of 13 days for insured seniors is boosted by over-75 critically ill but overall rate roughly parallels that of teens-through-50 age group. How about that, Mr. Forand?

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

January 1960, Vol. I, No. 1

Hypothyroidism and Myxedema

L. T. CARL, M.D.
Jackson, Mississippi

The thyroid gland regulates the rate of function of body cells and tissues. When this gland is underactive, the body processes are slowed. A mild degree of this condition is called hypothyroidism and when the thyroid function is very deficient, the patient develops myxedema. This is characterized by sluggish bodily and mental processes which lead to characteristic changes in appearance, mental depression, intolerance to cold, and anemia. In recent years more accurate diagnostic tests have become available. These are the measurement of the amount of iodine in the blood and the amount of radioactive iodine absorbed by the thyroid. The basal metabolic rate which measures the amount of oxygen used by the patient is still widely used.

Treatment with thyroid extract to replace the deficiency produces marked improvement and most patients become normal. Ordinarily, treatment must be continued throughout the lifetime of the patient.

HYPOTHYROIDISM HAS BEEN DEFINED as a condition in which the hormone production of the thyroid is sufficiently diminished to cause detectable deficiency manifestations. Myxedema is applied to the condition where there is almost complete absence of thyroid function. The following discussion is concerned principally with myxedema.

INCIDENCE

The incidence of myxedema is said to be low, estimated to be 1 out of every 1,500 hospital admissions. It occurs five times more frequently in the female sex than in the male, and it is said that in areas not subject to endemic goiters this ratio may be even higher, 9 to 1. It can develop at any age, but is most frequent in adults between the ages of 30 to 60 years. In a group of approximately 30 cases seen since 1947 the youngest was 19 years of age, a boy in high school, and the oldest was 78 years of age. Its apparent rarity may be due to our failure to recognize it, because we fail to think of it, or consider it to be rare. I am convinced that such is not the case, and therefore have chosen it for discussion.

ETIOLOGY

The causes of adult myxedema as discussed by Selye in his textbook of Endocrinology are as follows: 1. Iodine deficiency goiter, usually of the endemic type. He considers this to be the most common cause of hypothyroidism and myxedema. 2. Primary atrophy of the thyroid, a process leading to infiltration of the gland with connective tissue and lymphocytes, the etiology of which is unknown, although in some instances a previous inflammatory process may be suspected. 3. Chron-

Read before the Section on Medicine, 91st Annual Session, Mississippi State Medical Association, Biloxi, May 12-14, 1959.

ic thyroiditis, which may destroy so much of the gland that it becomes functionally inadequate. 4. Secondary atrophy due to pituitary failure. This last group of cases is due to atrophy or destruction of the anterior portion of the pituitary gland, which in turn causes secondary loss of function of the thyroid, along with the other endocrine glands. This is so-called "pituitary myxedema." It is important that this type be recognized, because thyroid medication in these cases in the usual dosage may precipitate an Addisonian crisis. This is due to the fact that, along with the thyroid, the adrenals are also inadequate, and the patient is really suffering from a subclinical Addison's disease. When the body metabolism is stimulated by thyroid medication, the patient may be thrown into adrenal failure. 5. Destruction of the gland by neoplasms. 6. Primary aplasia of the thyroid, in other words failure of the thyroid gland to develop. This is considered to be extremely rare. Two other causes should be mentioned. The latter of these is probably as common or more common than any other definitely assignable cause. These causes are previous x-ray treatment for various conditions of the thyroid gland, and thyroidectomy. One should probably mention the possibility of hypothyroidism and even myxedema being produced by overdosage or too prolonged administration of antithyroid drugs such as Propylthiouracil. In the majority of cases no obvious cause for myxedema can be found, and one must assume it to be due to primary atrophy of the thyroid.

PATHOLOGICAL PHYSIOLOGY

The function of the thyroid is to stimulate the metabolism of all body cells. In advanced hypothyroidism or myxedema all body processes are slowed down due to a deficiency of the thyroid hormone. This fact explains the production of the various symptoms and signs of the disease. The BMR is low and may be minus 35 per cent to minus 45 per cent. Permeability of the capillaries is increased, leading to an accumulation of interstitial fluid, which produces a nonpitting type of edema. This peculiar type of edema is responsible for the name given to the disease by Gull, who thought that the edematous appearance of the skin was due to an abnormal deposition of mucus or myxomatous material, so he gave the name of myxedema to the condition. Fluid may also accumulate in the peritoneal, pericardial or pleural spaces. Excess protein is stored in the tissues and this also contributes to the thickening and nonpitting edema of the extremities. The protein content of the blood and the spinal fluid is high. This latter might be of importance in differential diagnosis at times, since it might lead to confusion with other conditions in which the protein content of the spinal fluid or blood is elevated. With the development of myxedema the blood cholesterol may increase to 500 or 700 mg per 100 cc.

Myxedematous degenerative changes take place also in the heart muscles. This is reflected in changes, in the EKG, which are so characteristic that the diagnosis can be made, and almost certainly confirmed in a suspected case, from this finding alone. The changes consist of low voltage of all complexes, sinus bradycardia, and prolongation of the QT interval, but particularly, low, isoelectric, inverted and/or prolonged T waves. This probably is related to the myxedematous muscle fibers, with slow and abnormal conduction (repolarization). The EKG becomes normal after thyroid medication is instituted.

X-ray, in advanced cases, will show an increase in the size of the heart. This is reversible after thyroid medication, the heart decreasing in size, due to resorption of the myxedematous swelling of the heart muscle, although some of the increase in heart size may be apparent rather than real, due to increase in pericardial fluid. Blood flow throughout the body is subnormal. Constipation is common, due to decreased motility of the gastrointestinal tract. Mental processes are slow, and so is nerve function in general.

Anemia is very common in severe hypothyroidism and myxedema. It may be of any type. When macrocytic, it can be confused with pernicious anemia. The anemia of hypothyroidism is not controlled by liver extract or vitamin B_{12} or iron, because it is due to the inability of the bone marrow to function adequately in the absence of thyroid hormone. It improves on thyroid medication, although less rapidly than the other manifestations. In the presence of an anemia refractory to treatment, hypothyroidism or myxedema is a possible cause to be ruled out.

Myxedema in women very commonly causes menstrual disturbances, and this is most often a menorrhagia or functional uterine bleeding. There is also interference with reproductive activity, productive of sterility.

Myxedema is usually insidious in its onset and slow in its progress, so that the physician who has been seeing the patient through the years may fail to recognize its presence. The following symptoms of myxedema in the order of their diminishing frequency is enumerated by one author, who emphasizes that this does not exhaust the list. ". . . weakness; lethargy; slowness of speech, dry-

ness and coarseness of skin; edema of the eyelids, face and tongue; sensitivity to cold; dryness and coarseness of the hair and loss of hair (involving the lateral portions of the eyebrows); constipation; menorrhagia; dysmenorrhea; deafness; slow pulse; and low arterial blood pressure (not too common). The patient may gain 10 to 15 pounds of fluid and protein, but loses actual tissue, so that there may be reduction in weight. Hypothyroidism is not productive of obesity. Interference with cardiac function may lead to dyspnea, palpitation, and precordial pain. Some patients, and I would like to emphasize this, in spite of mental slowness, suffer from nervousness and emotional instability."

Most of these symptoms are seen in other conditions, and when seen alone or unaccompanied by others, would not suggest hypothyroidism. However, when myxedema is fully developed, there is a striking appearance, which is unmistakable and diagnostic. These patients will usually admit on questioning that their family has noted that they snore badly, which is probably due to thickening of the tongue and pharyngeal tissues. Sometimes it is difficult to see the throat well with a tongue depressor because of this. Because of thickening of the hands, the fingers appear short and stubby.

Malaise and aches and pains, simulating bursitis or arthritis or neuritis or neuralgia, are common. It is said that these patients are unusually sensitive to sedative drugs, and that half a grain of codeine has been known to cause death. A constant aching or pain in the chest which is aggravated by effort may occur independent of any heart disease. However, due to the myxedematous involvement of the heart muscle, and probably also due to acceleration of arteriosclerotic changes in the coronary arteries secondary to the elevated blood cholesterol, these patients may exhibit symptoms of angina and congestive failure.

Hypothyroidism is often improperly labeled neurasthenia, nervous exhaustion or nervous indigestion. These diagnoses reflect the patient's fatigue, probably the most common symptom, which is usually of gradual onset and slowly progressive, so that finally everything is an effort, and the patient is content to rest or fall asleep rather than struggle against his fatigue to accomplish even his or her routine daily tasks. Mental changes occur, patients being sluggish and lethargic. Loss of memory and poor judgment and mental deterioration in general are said to take place, and some patients with myxedema show definite psychotic changes.

Cold intolerance is an invariable symptom, and when questioned, these patients state they "freeze in the winter" and enjoy hot summer weather. This is a corollary of their decreased heat production secondary to their sluggish metabolism. They must wear heavier clothes, sleep under heavier covers, and have the room temperature higher than other members of the household. One other observation, not usually mentioned in descriptions of myxedema, is the occurrence of severe disease of the gums, with pyorrhea, bleeding and loosening and loss of teeth.

DIAGNOSIS AND DIFFERENTIAL DIAGNOSIS

Diagnosis of myxedema is usually obvious because of the patient's appearance. A carefully taken history will usually help. A BMR is usually decisive, but a word of caution should be added here. It is merely a mechanical or technical test, which measures the patient's consumption of oxygen, and like any test, can be inaccurate or even grossly misleading. If done correctly, and if the patient is in a basal condition, it is most helpful in diagnosis. However, if the patient's history and physical findings are those of myxedema, too much reliance must not be placed on a BMR which does not coincide with the clinical diagnosis. When the basal metabolic rate falls to minus 20 per cent, clinical symptoms and signs usually appear. With severe myxedema, readings as low as minus 50 per cent are found. A word of caution as to interpretation of the BMR, in addition to what has just been said above, is in order. "Hypometabolism" is not synonymous with hypothyroidism, and like those people who normally have a subnormal temperature and an unusually slow pulse, and are still quite normal and healthy, some normal people have a low basal metabolic rate. In other words, one would not be justified in making a diagnosis of hypothyroidism or myxedema on a low basal metabolic rate alone.

The simultaneous determination of the cholesterol content of the blood is also helpful. It usually, but not invariably, is elevated in proportion to the severity of myxedema and/or the lowness of the BMR. Again, this test is a technically difficult one, and even in very good laboratories is subject to considerable error at times. As stated above, most patients will show a moderate anemia, some a severe anemia. Other causes for anemia such as bleeding or malignancy or inadequate diet or PA, etc. must be ruled out. A history of prolonged anemia without response to adequate and suitable medication would help justify a diagnosis of myxedema provided, of course, that other signs were found. Myocardial insufficiency is often suspected because of edema and dyspnea and lack of energy. There may, in fact, be cardiac

involvement. However, it is due to thyroid deficiency. Furthermore, because of the pale and waxy appearance, the puffy face and eyes and body in general, and the anemia, and the fact that the blood pressure is not infrequently above normal in these patients, one thinks of a severe and late nephritis, or a nephrosis.

Blood iodine studies are helpful, and this test is now readily available. Normal values range between 3.2 and 8 micrograms. Arbitrarily, a reading of 3 micrograms or less for protein-bound iodine is strongly suggestive of hypothyroidism. Like the basal metabolic rate and blood cholesterol, the protein-bound iodine would be a confirmatory, and not an indispensible, test in frank myxedema, although it might be of great value in a borderline case. Previous diagnostic tests using iodine-containing opaque media (Priodax, Telepaque, Diodrast, Pantopaque, etc.) would rule out the usefulness of the test for months, possibly up to one year or longer, and iodine medication such as Lugol's solution, potassium or other iodides, or even thyroid extract medication (26 to 36 per cent iodine) would give deceptively high readings. I^{131} uptake studies are also helpful, and it is claimed that whereas the BMR may be 60 to 70 per cent accurate diagnostically, uptake studies may be 85 to 90 per cent accurate. However, like the protein-bound iodine test, previous diagnostic or therapeutic iodine administration would make this test inaccurate or useless. In general, an uptake of over 50 per cent at 24 hours suggests hyperthyroidism, between 15 to 45 per cent normal thyroid function, and less than 10 per cent hypothyroidism.

A very helpful sign is the Achilles tendon reflex, the characteristic sign being a slow lag-like relaxation phase. This is due to the myxedematous involvement of the muscles and subcutaneous tissue. So far as I know, this is not seen in other conditions.

TREATMENT

Treatment is the administration of thyroid extract, which the patient must continue for life. Small doses should be used at first. The textbooks speak of doses in the range of 1/10 grain, but in my small experience doses of 1/4 grain or even 1/2 grain as a starter are perfectly safe. It is paradoxical, but the more pronounced the thyroid deficiency, the less the dosage needs to be to cause improvement. These patients will not tolerate large doses of thyroid extract such as one might use in a milder case of hypothyroidism in an attempt to relieve symptoms. The smallest dose which will control the symptoms should be used, and since thyroid extract does not have its full effect until approximately two weeks after it is begun, changes in the dosage should not be made except every two or three weeks. Management of a case should be based on one's clinical impression of the patient's progress rather than on the BMR, because a patient may feel much better with a BMR of minus 15 per cent than if it were normal or slightly above normal. No tolerance to thyroid extract is built up even after years of medication. Over-dosage may lead to hyperthyroidism, which could be particularly harmful for patients who are elderly or who have coronary arteriosclerosis or other signs of myocardial involvement.

After thyroid extract is started, improvement soon becomes apparent, consisting of increase in sense of well being and alertness, a change in the voice, and decrease in swelling of the face, feet and legs. More slow is a change to normal of the skin texture, regrowth of hair, resumption of menses if in the menstrual age, and gradual improvement in anemia, and return of the electrocardiogram to normal. It is most striking and gratifying to see how much improvement a small dose of thyroid extract can produce in these patients, many of whom have been suffering for years, without response to other medication.

CASE REPORTS

CASE 1

The youngest case, WG, age 19 when first seen on August 25, 1952, was a classic example of severe myxedema. He had complained of backache and leg ache for the preceding three or four months. A year before his family physician had been concerned about the yellowish skin tint. He had played football for three years, the first two as an end. Because he had slowed up, he was played as center, but could hardly keep up there, because of easy fatigue and dyspnea. Formerly an excellent student, during the preceding school term he had to study hard to make an average grade. His mother had noticed that he slept a great deal, and had marked intolerance to cold. He had pyorrhea and had lost two teeth because of abscesses. Minor skin injuries became infected, and he had a very severe infection two years previously.

His temperature, in hot August weather was 97.4 degrees. Eyelids, cheeks and lips were puffy, expression dull and the skin a pale waxy color. Skin all over the body was dry and rough. The tongue was larger and thicker than normal. Examination otherwise was negative. The electrocardiogram showed typical changes of myxedema.

The BMR was minus 48 and minus 50 per cent. The blood cholesterol was 323 mg per cent.

He was started on 1/2 grain of thyroid extract with rapid improvement. The dose was gradually increased to 2 grains daily. He lost 20 pounds in weight, although he was not obese in the beginning. The electrocardiogram became normal in appearance. The last BMR was minus 6 per cent.

CASE 2

Mrs. SAC, age 25, was seen first on January 2, 1956 with a chief complaint of anemia. A sternal marrow study had been done at a large Naval diagnostic center in the East. The anemia had not improved after fifteen weekly injections of liver extract and B_{12}. Her history went back to 14 or 15 years of age, when her mother had taken her to her home physician because of swelling of her face and hands and because she had not menstruated. After onset of menstruation at age 15, her menses had been regular until the birth of her child three years before, her only pregnancy. Since that time menses had been irregular, and very profuse and prolonged. She tolerated cold poorly; she was very nervous; she felt sluggish, and could fall asleep any time. Her skin and hair had been dry for years. Her voice had sounded tired.

Examination showed a temperature of 98 degrees, pulse 72 and regular, BP 95/70, height 5′ 6″, weight 125. She was a well developed young woman with the characteristic puffy facies of myxedema. The skin was dry and wrinkled. The isthmus of the thyroid was questionably palpable. The abdomen appeared moderately prominent. There was a typical myxedema-type Achilles tendon reflex, described above. Her voice was "tired." There was a moderate anemia—Hbg. 7.5 grams or 51 per cent, V per cent 26, RBC 2,610,000, MCV 100, MCHbg 28.7; the white and differential count were normal, as was also a VDRL test and a urinalysis. An electrocardiogaam was typical of myxedema. Since this patient was returning to her job in another city the following day, there was no opportunity for doing a BMR or PBI, or blood cholesterol.

In view of the certainty of the diagnosis, she was told to begin treatment with 1/2 grain of thyroid extract and these data were referred to the Naval Dispensary. When next seen on July 30, 1958 she was on a maintenance dose of 2 grains of thyroid extract. She had a second child, having become pregnant approximately one month after starting thyroid extract, and having lost eight pounds in two weeks. Her anemia had improved and she no longer was intolerant to cold. She weighed 116 pounds. Physical examination was negative, and the ankle jerk was normal. Her general appearance was greatly improved. An electrocardiogram was quite normal. A chest x-ray and a post-prandial blood sugar were normal; hemoglobin was 76 per cent. The features of this case are typical of advanced myxedema in the female.

CASE 3

Mrs. SC, age 25, was seen first on March 18, 1954. She was given thyroid extract with her first pregnancy five years before. Approximately 14 months later she became nervous and developed other symptoms, and about that time became pregnant, which she lost at one month. A diagnosis of thyrotoxicosis was made, and thyroidectomy was done in May 1950, although she maintained that she had been gaining weight, and that the basal metabolic rate prior to surgery was minus 22 per cent. When a basal metabolic rate was done approximately 1 1/2 years later, she was told that it was very low. Intermittently after that time she had taken thyroid extract; but she thought that the dose was never more than 1/2 grain daily, and she had taken none during the preceding month. She had hypertension with her third and fourth pregnancies. Approximately two months before she was first seen, she began to have painful swelling of the lower legs, not improved by ammonium chloride and mercurial diuretics. The hands and face also were swollen. She felt sluggish, her memory was poor, she was easily confused, and she could not get her housework done. She could sleep any time. The hair and skin had become dry. She felt cold even in the warmest weather. She was very nervous and depressed. She was hoarse, ached all over, and stated that the hearing in the left ear had become poor.

Examination showed dry, scaly skin and thick subcutaneous tissues, with swelling of the lower legs and feet, which pitted only with firm pressure. She was uncomfortably cold and shivering. The blood pressure was 145/100, and the weight was 155. There was a typical Achilles reflex. Physical examination was otherwise negative except for mild swelling of the face and hands. A chest x-ray was negative. An electrocardiogram showed fairly typical myxedema-type changes. There was a moderate normocytic normochromic anemia, with a hemoglobin value of 10.5 grams or 71 per cent, a mean corpuscular volume of 97, and a mean corpuscular hemoglobin of 29. A urinalysis was negative.

A diagnosis of probable spontaneous or idio-

pathic myxedema aggravated by the thyroidectomy was made, and she was told to resume thyroid extract, grains 1/2. She was next seen on July 17, 1954, taking grains 1 1/2 of thyroid extract daily. Her general condition had improved greatly, and most of the swelling had disappeared, having lost five pounds. The blood pressure was 135/-80. Two basal metabolic rate determinations were minus 4 per cent and minus 6 per cent respectively. The blood cholesterol was 267 mg per cent, and hemoglobin was 11.5 grams or 79 per cent. An electrocardiagram showed much improvement.

CONCLUSION

In conclusion, my justification for talking about thyroid deficiency disease is to insist that if one is on the alert for these cases, he will find that it is not a rare condition, although it is often overlooked. The symptomatology discussed and the illustrative cases cited just now have been examples of marked deficiency. Undoubtedly for every such case there must be several with less obvious complaints or findings. Since the response to treatment is so gratifying and satisfactory, it behooves us to be on the lookout for it. ★★★

730 Lakeland Drive

OB-GYN BOARD EXAMINATIONS

Next scheduled examinations of candidates for certification by the American Board of Obstetrics and Gynecology will be conducted at Chicago, the Edgewater Beach Hotel, during the period May 11-16, 1960. The examinations will be attended by the entire Board and will consist of oral and clinical inquiry, comprising Part II.

The Board announced that candidates who participated in the Part I examinations will be notified of their eligibility for Part II examinations at an early date. The statement continued that the deadline for new and reopened applications for the 1961 examination series is August 1, 1960, but candidates are encouraged to submit applications prior to that date. Inquiries should be directed to the American Board of Obstetrics and Gynecology, Robert L. Faulkner, M.D., Secretary, 2105 Adelbert Road, Cleveland 6, Ohio. Where applications are pending, candidates should notify the Board promptly of changes of address.

Thyroid Carcinoma: Diagnosis and Management

GEORGE H. MARTIN, M.D.
Vicksburg, Mississippi

This discussion of the controversial subject of carcinoma of the thyroid gland presents the generally accepted classification as to pathology. Difficulties which may be encountered by the pathologist in differentiating some cases of marked hyperplasia from carcinoma are emphasized and surgery is pointed out as the most effective available method of treating this disease by either total or subtotal thyroidectomy in localized thyroid cancer or when utilized in conjunction with radical neck dissection with unilateral or bilateral lymph node involvement. Routine prophylactic postoperative x-ray therapy is not recommended but justification is accorded use of such therapy as a palliative measure in residual, recurrent, and inoperable cases. Suppression of TSH is recommended and prognosis contingent upon type of malignancy is discussed.

EVEN WITH THE MANY advances in surgery, the management of tumors of the thyroid continues to be a most controversial subject. One may find in the literature opinions to support almost any thesis. Although many conflicting ideas exist, there have evolved certain principles in which reasonable agreement can be reached.

INCIDENCE

Thyroid cancer can occur at any age beyond infancy.[10] The fact that children may develop thyroid malignancy is now adequately documented in the literature.[4, 8] Women are affected more than men with the ratio in females over males being approximately 7 to 3. White and nonwhite women apparently share the same risk of thyroid cancer.

The incidence of thyroid carcinoma in toxic goiter is extremely low but can coexist. The occurrence of malignancy rises sharply in non-toxic nodular goiter and is highest in solitary non-toxic thyroid nodules. The incidence of cancer in solitary nodules has been reported to be from 4 to 50 per cent, but most authorities agree that from 10 to 25 per cent is a more accurate figure.

PATHOLOGY

Although many different histological classifications of malignant tumors are available, most universally accepted is a modification of the classification by Shield Warren (1941). The relative incidence included in the following table is from Meissner (1948).

The microscopic diagnosis of thyroid cancer may be extremely difficult. The marked hyperplasia of Graves' disease may look more malignant than a well differentiated carcinoma of the thyroid. The differential diagnosis between the well differentiated carcinoma and a benign adenoma is practically impossible on frozen section.[1] Unless there is evidence of infiltration of surrounding tissue or lymph node metastasis, it is best to wait on permanent sections for final diagnosis.

Regional metastasis of well differentiated tumors may be slow. Papillary adenocarcinoma may remain confined to the neck or mediastinum for long periods of time. Recurrences may occur in regional nodes many years after the primary tumor is removed. Regional lymph node metasta-

From the Surgical Section of The Street Clinic and Mercy Hospital, Vicksburg.
Read before the Section on Surgery, 91st Annual Session, Mississippi State Medical Association, Biloxi, May 12-14, 1959.

sis is usually unilateral if only one lobe of the thyroid is involved, but if the thyroid is totally invaded, adenopathy is often bilateral.

Organs most frequently affected by metastatic disease are lymph nodes, lungs, bones, liver, kidney, and brain. There is a striking tendency to metastasis to bone. The skull, vertebra, and pelvis are most often involved.

CLINICAL COURSE

Although anaplastic carcinoma may follow a fulminating course, most tumors of the thyroid develop slowly over a period of years. The first sign is usually a nodule or "goiter" noticed by the patient or found on physical examination. As the tumor spreads, pressure symptoms of choking, hoarseness, and dysphasia may occur. Vocal cord paralysis may result from invasion of the recurrent laryngeal nerve.

The appearance of cervical adenopathy is occasionally the first symptom of papillary adenocarcinoma. This previously led to the misconception of lateral aberrant thyroid tumor. Most pathologists now agree that such tumors are metastatic implants rather than primary tumors.

DIAGNOSIS

Carcinoma of the thyroid should be suspected in any young female with a single non-toxic nodule, as such tumors have a greater chance of being malignant than of being benign.[1] If there is regional lymph node enlargement, a careful search of the gland should be made for a primary tumor. Malignant adenomas are usually firm, fixed, and less well defined than benign adenomas. In highly malignant tumors, the induration may be diffusely distributed throughout the gland and fixation may extend beyond the capsule of the thyroid. Definitive diagnosis must be deferred until microscopic examination of the thyroid nodule or regional metastatic nodes is made.

Every patient suspected of having a thyroid tumor should have roentgenographic examination of the neck, the chest, the skull, the spine, and the pelvis. X-ray studies of the neck may show a soft tissue mass with or without calcification, but more frequently displacement or compression of the trachea. Films of the chest may reveal unsuspected upper mediastinal or pulmonary metastasis. Osseous metastasis is often observed in the bones of the spine, pelvis, and skull.

The administration of tracer dose of I^{131} may be of value in a negative way. Normal thyroid usually shows good uptake of I^{131} while most tumors of the thyroid gland may show little or no iodine uptake. In general, the better differentiated the tumor and the more abundant the colloid, the greater is the uptake of radioactive iodine. In poorly differentiated neoplasms, in most papillary tumors, and in Hürthle cell carcinomas, there is little or no uptake of radioactive material.[5]

A suspected malignant tumor of the thyroid must often wait for surgical exploration for final diagnosis. The surgeon should look for the so-called Delphian node which is found in the midline just above the isthmus of the thyroid. This node is often the site of metastasis in early malignant tumors of the thyroid. A frozen section of an enlarged lymph node may confirm the diagnosis and indicate radical procedure. If, however, a nodule is found within the substance of the thyroid, it is practically impossible to distinguish be-

CLASSIFICATION AND INCIDENCE MALIGNANT TUMORS OF THE THYROID

		Incidence
Group I.	Low or potential malignancy	
	1. Adenoma with blood vessel invasion	25%
	2. Papillary cystadenoma with blood vessel invasion	
Group II.	Moderate malignancy	
	1. Papillary adenocarcinoma	
	2. Alveolar adenocarcinoma	46%
	3. Hürthle cell carcinoma	
Group III.	High malignancy	
	1. Small cell carcinoma (a. compact type; b. diffuse type) — 25%	
	2. Giant cell carcinoma	30%
	3. Epidermoid carcinoma	
	4. Fibrosarcoma — 5%	
	5. Lymphosarcoma	

tween a well differentiated carcinoma and a benign adenoma. Frozen section may verify gross infiltration of surrounding tissue by tumors, and it can easily eliminate the possibility of Riedel's struma which might be confused with carcinoma. If, however, the frozen section is not diagnostic, radical surgery should be delayed until a definitive diagnosis is made from permanent sections.

TREATMENT

Surgery is the most effective available method of treating thyroid cancer. Such controversies that exist do not concern whether surgery should be used, but how it should be used.[10] In exploring a thyroid gland containing a solitary nodule, without clinical evidence of lymph node metastasis, a wide excision of the nodule with an adequate margin of normal gland should be carried out. This will often necessitate the removal of the involved lobe and the isthmus. If, on frozen section, a diagnosis of papillary cancer or undifferentiated carcinoma can be made, a total thyroidectomy is indicated. Cattell has been quoted as believing that hemithyroidectomy plus removal of the isthmus is sufficient in a solitary nodule of papillary carcinoma. However, Frantz[6] and McDonald[7] have demonstrated that papillary carcinoma of the thyroid may have multiple foci. In 43 cases recorded by Frantz in which total thyroidectomy was done, one-third of the patients had evidence of involvement of both sides; and in the majority of these cases contralateral spread had not been suspected.[6] If after careful search, no evidence of regional lymph metastasis is found, it is my opinion that prophylactic neck dissection is not indicated.

In the presence of papillary carcinoma with clinical evidence of lymph node metastasis, total thyroidectomy plus neck dissection of the involved side should be carried out. The sternomastoid muscle can usually be spared as infiltration of this structure is extremely rare. Removal of the jugular vein and a thorough carotid sheath dissection is all that is necessary.

In rare instances in which one is fortunate enough to encounter an anaplastic carcinoma still confined within the thyroid capsule, radical surgery is indicated. This should include total thyroidectomy combined with removal of the strap muscles, the internal jugular vein, the sternomastoid muscle, and all regional lymph nodes on the involved side.

In the presence of undifferentiated cancer which has extended beyond the capsule of the thyroid into the soft tissue, it is questionable whether any procedure other than biopsy should be done. Palliative thyroidectomy may be carried out to avoid compression of the trachea or to increase radioactive iodine uptake of bone metastasis. In the presence of bilateral cervical metastasis, it is doubtful whether extensive surgery is indicated. Staged bilateral neck dissection may be done as a palliative procedure to prevent invasion of the trachea and strangulation. However, most of these patients will succumb to distant metastasis.

In general, papillary adenocarcinoma comprises about 50 per cent of all thyroid cancers and carries the best prognosis. Surgical control of alveolar carcinoma, solid adenocarcinoma, and Hürthle cell carcinoma has been less successful. Giant cell carcinoma of the thyroid is universally fatal and although it comprises only a small per cent of the total group, once a diagnosis is established, there is no point in attempting surgical treatment as not a single cure has ever been achieved.[10]

POSTOPERATIVE TREATMENT

Routine prophylactic postoperative x-ray therapy is not recommended as there is little evidence that such therapy serves to prevent the development of recurrences. However, in the presence of residual, recurrent, or inoperable carcinoma, palliative x-ray therapy is justified. In general, the anaplastic, rapid growing tumors are highly radiosensitive and palliative x-ray therapy will considerably prolong the life of the patient. It is also of unquestionable palliative value in the treatment of mediastinal and bone metastasis.

The administration of I^{131} as a tracer may contribute information as to the presence and site of metastasis. However, in general, the treatment of metastatic lesions by I^{131} has been most disappointing as the uptake of iodine may be very low. The radioiodine uptake may be increased by thyroidectomy, by destruction of the normal gland with large doses of I^{131} or by the injection of thyrotropic hormones. In general, however, total thyroidectomy is preferable.

Because of the apparent dependency of certain types of thyroid neoplasms on thyrotrophic hormones, suppression of the secretion of TSH by the pituitary gland has been advised in all patients with a history of thyroid cancer. In patients who have been operated upon for thyroid cancer, suppression of the pituitary stimulus to growth should minimize the recurrence of residual neoplasm. Suppression of TSH can be accomplished by any of the available thyroid hormones; namely, desiccated thyroid, thyroxin, and L-Triiodothyronine. For long time prophylactic management, desiccated thyroid has the advantage of low cost and ready availability. Usually 3 to 4 grains a day are adequate. L-Triiodothyronine is advantageous

when employing suppression of the thyrotrophic hormone on a therapeutic basis. Its action is more immediate. There is suppression of the radioiodine uptake, and the protein bound iodine falls to hypothyroid range.[10] The usual dose is 100 mcg administered once a day.

PROGNOSIS

Patients with adenomas of the thyroid with blood vessel invasion have a good prognosis following adequate treatment. Over 90 per cent of these patients are apparently cured. Papillary adenocarcinoma has a relatively good prognosis with approximately 80 per cent five year survival. However, the apparent good results may be due to the slow progression of the disease as patients with papillary adenocarcinoma have been reported to survive 17 years after the development of pulmonary metastasis. The alveolar adenocarcinomas have a less favorable prognosis. The small cell carcinomas are even less successfully controlled. Only 20 per cent are well five years after surgery and roentgen therapy. Giant cell carcinomas are never controlled and are universally fatal.

SUMMARY

Carcinoma of the thyroid remains a most controversial subject, although certain areas of reasonable agreement have been reached.

1. Malignant tumors of the thyroid occur most frequently in solitary, non-toxic nodules in young women.
2. Lateral aberrant tumors are a myth. These are metastatic thyroid malignancies.
3. It is often impossible to make a definitive diagnosis of carcinoma of the thyroid on frozen sections.
4. Solitary nodules of papillary carcinomas should be treated by total thyroidectomy.
5. In the absence of clinical evidence of lymph node metastasis in papillary carcinoma, prophylactic neck dissection is not indicated.
6. Papillary carcinoma with lymph node metastasis should be treated by total thyroidectomy and modified unilateral neck dissection.
7. Undifferentiated intracapsular thyroid carcinoma should be treated by total thyroidectomy plus unilateral radical neck dissection.
8. Undifferentiated carcinoma with extracapsular infiltration is probably best treated by biopsy alone followed by palliative postoperative management.
9. X-ray therapy is of palliative value, especially in bone metastasis.
10. Radioactive I^{131} has proven to be of little value in the treatment of thyroid carcinoma.
11. Suppression of pituitary TSH is indicated in all patients with a history of thyroid cancer.
12. The prognosis in thyroid carcinoma varies with the type of malignancy, being good in papillary adenocarcinoma, poor in small cell carcinoma, and nil in giant cell carcinoma. ★★★

The Street Clinic

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EPILEPSY CONTROL

Anticonvulsant drugs can control 48 per cent of epileptics. There are 1,500,000 in the U. S. suffering from epilepsy, while about 700,000 suffer from cancer.

A Critical Review of Methods of Diagnosis and Treatment of Female Sterility

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"To treat sterility, we must ascertain if the spermatozoa go into the cervix uteri. Also we must treat the cervix until the discharge fails to kill the spermatozoa."

Marion Sims
1865

CERVICAL MUCUS AND THE CERVICAL FACTOR

THE ABSENCE OF ACTIVE spermatozoa in the mucus of the genital tract is not necessarily due to "cervical hostility"—it may be due to defective sperm or absence of sperm migration. Sperm motility—indicating activity—which may be manifested by side to side motion or circular paths of travel, is not synonymous with sperm migration which is a forward progression movement.

Grant[1] in a study of 2,200 patients performed a Sims' cervical test 2-8 hours after intercourse. In 920 of these patients a fundal test[2] was also performed. Ten per cent of the latter group had a negative cervical test and a positive fundal test. Apparently the male cells had already progressed beyond the cervix at the time the cervical test was performed. It was also noted[3] that the removal of an abnormal plug of cervical mucus during a tubal patency test or a Sims' cervical test, that was negative, was followed by a more favorable test in the subsequent month. The assumption being that a more favorable mucous plug was substituted.

There are no set criteria for a positive or normal sperm invasion test.[2, 4, 5] The more the number of active sperm in the cervical mucus, the more normal the test; however, Williams[6] has found that pregnancy may follow the presence of only one migrating sperm. If the cervical test is negative, it must then be determined whether the sperm is defective or whether the cervical mucus is faulty. The fern test is a good differential diagnostic aid. Cervical mucus obtained at the approximate day of ovulation is spread on a glass slide and dried. A palm leaf or fern effect will be seen under the low power lens of the microscope.[7] These crystals are due to sodium chloride. The apparatus used to collect the mucus must be free of saline. Estrogens stimulate this crystallization phenomenon and progesterone suppresses it. Cervical fluid does not inhibit a spontaneous fern reaction. Lewis[8] found that:

1. If the fern test is positive, failure of sperm to invade cervical mucus is due to male element.
2. If the fern test is negative, good sperm may still invade cervical mucus—poor ones will fail to do so.

Both cervical mucus and plug are considered as factors in sterility and methods of treatment are described. Attention is devoted to ovulation factors as to functional failure and treatment, recognizing interplay of thyroid, pituitary, adrenal, and ovarian functions. The importance of the fallopian tubes and peritoneum as sterility factors are evaluated together with the psychogenic syndrome. Emphasis is placed upon devoting time and attention in all sterility cases.

The common causes of abnormal cervical mucus are: mechanical (clumps of pus) or increased viscosity with diminished electrolyte content, described by Zondek[9] as dysmucorrhea."

If the post coital test is positive then the sterility is probably due to pathology inside the female pelvis.

Read before the Section on Obstetrics and Gynecology, 91st Annual Session, Mississippi State Medical Association, Biloxi, May 12-14, 1959.

TREATMENT OF THE CERVICAL FACTOR

The dry cervix, which never shows the characteristic watery ovulation mucus may respond to small doses of estrogen, 0.1-0.2 mg orally or vaginally, frequently this is ineffective and larger doses of estrogen will suppress ovulation. The thick viscid mucus that may be infected is usually unresponsive to antibiotics and chemotherapeutic measures; yet, some investigators[10] reported better post coital sperm migration and an increased incidence of pregnancy following the use of antibiotics. Stevenson in a small series of cases concluded that the pH determination of cervical mucus is of important prognostic value—women in whom the pH of cervical mucus was 6.3 or higher (less acid) had a six times greater chance of success than did those whose pH was 6.2 or lower. Cary's study shows that the cervix is a factor in infertility in only 10 per cent of cases.

THE DIAGNOSIS AND TIMING OF OVULATION

Cervical Mucus—Pommerenke has shown that ovulation increases cervical mucus tenfold and its viscosity is greatly diminished. This makes the mucus more penetrable and enhances normal sperm migration. These conditions are optimal for 3 days, sometimes as long as 4 days. Progesterone activity, indicated by the rise in basal temperature, induces a reduction of mucus and a decided rise in viscosity and cellularity which may block sperm migration, without necessarily impairing sperm motility. Since cervical mucus changes are so characteristic—in the pre-ovulatory phase—cervical mucus studies serve as a good timing device of ovulation.

Vaginal Smears—Vaginal smear studies are also of value in timing ovulation. Smears studied 2 days prior to ovulation will show an increase in the degree of cornification and clumping of desquamated cells. This coincides with the low point shift of the basal temperature graph. The smear findings are markedly different on the day after ovulation. Because of the necessity of obtaining and examining almost daily smears, the method becomes somewhat impractical.

Basal Temperatures—The majority of investigators consider the variation of basal temperature to be a reliable indication of ovulation. A marked rise in premenstrual temperature usually implies that ovulation has taken place. Absence of such a rise does not prove that ovulation has failed to occur. The objection to this method is that the responsibility for the accuracy of the graph is placed on the patient herself and it is not a reliable guide for the correct timing of ovulation.

Endometrial Biopsy—Endometrial biopsy study is the most exact method for determining whether ovulation has occurred. The specimen must be obtained from an area above the internal os and no earlier than 1 week before the anticipated day of onset of menstruation. Utilization of a stiff biopsy curette in an acutely anteflexed uterus may produce a specimen from a relatively unresponsive area of the endometrium, that may not always reflect progesterone activity. The presence of secretory endometrium is more significant than its absence, as the latter cannot be considered as evidence of ovulation failure.

TREATMENT OF OVULATION FAILURE

Broadly speaking, disturbed ovulation occurs in association with oligomenorrhea and dysfunctional uterine bleeding. Ovulation almost always takes place when women menstruate with regularity. The cause of ovulation failure can be determined only after thorough evaluation of thyroid function, adrenal function and pituitary-ovarian function. Briefly, it may be stated that most hyperthyroid conditions can be easily recognized clinically. Hypothyroidism may be diagnosed by demonstrating a low BMR, a low PBI, a low RAI uptake, flat glucose tolerance curve and an elevated blood cholesterol level.

Adrenocortical factors, influencing fertility, are most common in the women exhibiting the adrenogenital syndrome. In this condition, due to an enzymatic defect in the zona fasciculata of the adrenal cortex, inadequate amounts of hydrocortisone-like substances are produced, accompanied by an increased secretion of ACTH and an excessive production of 17 ketosteroid precursors. This, in turn, causes a diminution of gonadotrophin hormone secretion with resulting ovulation failure, which if prolonged may result in complete ovarian suppression. Therapy in these individuals, with an elevated 17 ketosteroid excretion level requires the administration of corticoid substance. The average dose used is: Cortisone 12.5 mg t.i.d., Hydrocortisone 10 mg t.i.d., or Prednisone 2.5 mg t.i.d.

Ovarian follicular phase activity may be ascertained in the patient with amenorrhea by the occurrence of a menstrual period within 2 weeks after the intramuscular injection of 100 mgm of Progesterone in oil. Progesterone, in this dose, cannot induce withdrawal bleeding unless the endometrium had been previously primed by estro-

gen. Ovulation can be induced in such patients, with proliferative phase activity, by the intravenous injection of conjugated estrogen. The rationale being that this triggers the stimulation of L.H. secretion by the pituitary gland, which induces ovulation. Kuppermen et al. achieved an ovulatory response in a little over 50 per cent of the cases studied. Failure to ovulate after 2 or 3 such injections may suggest the presence of a thickened ovarian capsule such as is seen in the Stein-Leventhal syndrome. Surgical treatment is of value in the treatment of these cases.

Low dosage irradiation of the ovaries, though it defies logic, has been used in the treatment of oligomenorrhea and anovulation. Israel reports a 71 per cent success in treating 124 patients with secondary oligomenorrhea. Another study mentions a 77 per cent success in a series of 88 patients treated with irradiation for ovulation failure and sterility. In view of the genetic hazards of ionizing radiation, it is perhaps wise to reconsider this therapeutic approach to the problem of ovulation failure.

Leading investigators suspect that in the majority of patients with oligmenorrhea or ovulation failure, the condition may be due to the presence of polycystic disease of the ovaries or varying degrees of the Stein-Leventhal syndrome. This condition can be diagnosed by culdoscopy. Wedge resection of the ovaries will usually be followed by improvement of the condition and eliminate the need for ovarian irradiation.

CORPUS LUTEUM FAILURE

The corpus luteum acts as a gland of internal secretion and like other endocrine glands is subject to insufficiency. Early secretory changes in the immediate premenstrual phase of a cycle seems to indicate "inadequate secretion phase endometrium" and often responds satisfactorily to the administration of oral progesterone. Progesterone insufficiency may also be suspected in patients with a persistent positive cervical mucus fern test throughout the cycle or in cases with diminished pregnandiol urine excretion.

THE FALLOPIAN TUBES AND THE PERITONEAL FACTOR

Uterotubal insufflation and hysterosalpingography have long been considered the methods for diagnosing tubal patency or occlusion. Repeated tests have often failed to make a conclusive diagnosis and many final diagnoses have later been proven incorrect. Evidence from reliable investigators tempts one to accept the inference that the methods of diagnosis of tubal patency are of limited value. Jeffcoate reports 37 per cent false negative with insufflation and 15 per cent with hysterosalpingography.

Peel has case histories of 12 patients who became pregnant after tubal occlusion was demonstrated by repeated salpingography.

Tompkins stresses the following points to add to the reliability of these procedures:

1. Kymographic tracings yield better results. Rhythmic waves following a precipitous fall indicates patency of one or both tubes provided shoulder pain follows immediately or later.
2. Uterotubal spasm should be overcome by the administration of a mild sedative 1 hour before the procedure is performed.
3. The CO_2 gas should be introduced slowly.
4. Three negative insufflations constitute an indication for salpingography or when insufflation test is positive and pregnancy fails to occur within 3 months.
5. Hysterosalpingography is by far the more reliable test of tubal patency. The desired information may be obtained by a single, properly performed and interpreted salpingography. The gynecologist should himself perform the salpingography and interpret the x-ray.

If non visualization of fallopian tubes occurs with salpingography, the procedure should be repeated under anesthesia. When visualization of one tube only occurs, with effective filling and emptying, this implies normalcy of the unseen tube in most instances. Fimbrial occlusion is by far the commonest type. Cornual occlusion is rare and must be diagnosed with skepticism.

TREATMENT OF TUBAL OCCLUSION

Tubal occlusion, due to organic disease, precludes the possibility of pregnancy unless the tube is opened by a surgical precedure.

At the present stage of development of salpingoplastic operations the following results may be expected, according to the site of obstruction:

Pregnancy following fimbriaplastic procedures occurred in 24 per cent of the cases of Rock, Mulligan and Easterday with the use of polyethylene hood and tubing.

Pregnancy following implantation operations averaged 22 per cent.

Andrews reported pregnancies in 36-100 per cent of patients operated on with mid-tubal obstruction.

It must be borne in mind, however, that ectopic pregnancy occurred in 14 to 36 per cent of the successful cases reported.

The "peritoneal factor" in sterility, as design-

ated by Murray comprises of adhesions of the fimbria, ovaries or both that may interfere with transmission of the egg from the ovary to the fallopian tube. This condition can be recognized only by culdoscopy. In cases where tubal patency can be ascertained following salpingoplastic operations with failure of pregnancy to occur, the loss of tubal function, might well be the cause of the patient's sterility.

PSYCHOGENIC STERILITY

This syndrome is assumed to exist when complete investigation fails to reveal an organic cause for infertility. The evidence is circumstantial—not scientific. The gynecologist is in a very favorable position to understand and to remedy such sterility. A complete family, medical and sexual history should be taken. Both parties should be interviewed individually. The gynecologist should be a good listener, he should be sympathetic and understanding in order that a good relationship can be established between patient and physician. Such a relationship serves as the basis of general psychotherapeutic principles. Experienced gynecologists have often found that psychogenic sterility can be cured by simple educational hints or logical, authoritative clarification of the patient's misconceptions or unfounded fears and inhibitions. Technic of intercourse, personal hygiene, male and female genital anatomy and physiology, simple as they may seem, might be discussed with perhaps resultant elimination of the patient's major mental stumbling blocks. If, however, the gynecologist is unable to resolve the condition within a reasonable period of time, psychiatric investigation is indicated.

SUMMARY AND CONCLUSION

The methods of diagnosis of female sterility are reviewed and the interpretation of the results obtained from such studies are commented upon. The medical, hormonal and surgical methods of treatment are briefly presented.

All methods of investigation must be utilized and studied with a critical attitude and many procedures should be repeated until a clear picture of the patient's condition is arrived at. Prognostication is often difficult, specially when it is considered that most all sterility problems involve a psychogenic factor, and in the absence of organic disease, absolute sterility cannot be diagnosed.

Sterility patients must be given the time and attention which the seriousness of their frustrations warrants. The gynecologist bears most of the responsibility because he is in the best position to fulfill this obligation. ★★★

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HEART DISEASE MORTALITY

Mortality from cardiovascular disease contributes directly to 38 per cent of all deaths in the United States annually, 30 per cent in Sweden and Great Britain, but only 16 per cent in France. In 1957, the U. S. death rate as related to this disease was 297 per 100,000, exceeding comparable rates in England by more than one-third, Sweden by more than one-half, and more than double that in France.

In each nation, cardiovascular-renal mortality among females has either declined or remained essentially static. Among males, especially in the age group 45-64, it has consistently risen.

—Health Information Foundation

Staphylococcal Pseudomembranous Enterocolitis

KENNETH M. HEARD, M.D., W. C. SHANDS, M.D.,
and GEORGE E. TWENTE, M.D.

Jackson, Mississippi

In recent years, especially since the advent of broad-spectrum antibiotic therapy, much attention has been given to the subjects of pseudomembranous enterocolitis and staphylococcal entercolitis. The relationship of the development of this condition to antibiotic therapy, surgery of the gastrointestinal tract, and other severe surgical, medical or traumatic conditions has been discussed in many articles and reviews.

PRIOR REPORTINGS

Only rare cases have been reported arising *de novo* in otherwise fairly healthy individuals. The Massachusetts General Hospital Cabot Case 42371 was that of a 70-year-old mildly diabetic white male who died thirty-seven hours after admission, and at autopsy he was found to have acute pseudomembranous esophagogastroenteritis, probably staphylococcal. Tremendous numbers of gram-positive cocci were demonstrated in the exudate from the bowel but these could not be cultured, presumably because of large doses of penicillin during the terminal twenty-four hours.

Blackman in 1935 reported a case of a 12-year-old colored girl who died approximately one and one-half hours after admission to Johns Hopkins Hospital. Twenty-four hours after admission she had had an onset of vomiting, headache and fever. She was in profound collapse on admission with a temperature of 103.4 degrees F. A blood culture taken prior to death yielded hemolytic Staphylococcus albus. At autopsy, there was acute diffuse enteritis affecting the jejunum and ileum, diphtheritic membranes, and moulds of jejunum and ileum in contents of intestines. Hemolytic Staphylococcus albus was grown from both the intestinal content and the blood stream.

From the Departments of Pathology and Surgery, Mississippi Baptist Hospital, Jackson, Mississippi.

CASE REPORT

The present case report is very similar. This 54-year-old white male was admitted to the Mississippi Baptist Hospital at 1:30 a.m. on May 17, 1957, in a state of shock. He had an onset of severe upper abdominal pain eighteen hours prior to admission. The pain became more severe during the night before admission, and he had a stool containing dark blood. Later he passed two stools containing bright blood and went into shock. His local physician was unable to obtain his blood pressure and pulse. He was given 100 mgm of Meperidine and intravenous fluid was started. He was transported about twenty miles to this hospital. His blood pressure was 70/40 on arrival and the pulse was weak and thready.

A case is presented where an apparently healthy 54-year-old white male succumbed to staphylococcal pseudomembranous enterocolitis. The condition seemed to appear spontaneously, arising in the absence of previous antibiotic therapy, surgery, or other serious illness.

For many years he had had epigastric distress, particularly after eating meats. This was relieved following bowel movements but did not respond to milk, alkalis or food. He had occasionally had tarry stools in the past, but he had never vomited blood. The patient did not smoke or drink. In the past history it was noted that he had lost his right eye twenty years previously in an accident. He had had no surgery or other serious illnesses. The family history was not contributory.

On physical examination the absence of the right eye was noted. The left pupil reacted to light and accommodation. There was no lymphad-

enopathy. The thyroid was not palpable. The chest had a normal contour. The blood pressure was 70/40. The heart rate was 130 with a regular rhythm and no murmurs were heard. The lungs were negative to percussion and auscultation. There was generalized abdominal tenderness, direct and rebound, with slight rigidity bilaterally. No masses were palpable. On auscultation, the abdomen was silent. Dark blood was demonstrated by rectal examination. The prostate was negative.

Immediately on arrival in the hospital, he was treated with vigorous supportive measures. A Levin tube was passed and a Wangensteen suction was begun. Probanthine was administered parenterally. He received 1,000 cc of blood. A serum amylase was reported on admission as 171 units. His hemoglobin was 17.4 grams and hematocrit 54 volumes per cent. The total white count was 10,600 with 97 per cent granulocytes, 2 lymphocytes, and 1 monocyte. The serum amylase was repeated several hours after admission and was 223 units.

All attempts to elevate the blood pressure were unsuccessful. The patient received norepinephrine in the parenteral fluids. At 10:30 a.m. on May 17 blood pressure was unobtainable and there was no urinary output. There was old blood in the Wangensteen suction. The patient continued to pass bright blood by rectum and the blood pressure was occasionally audible at about 60/90 with continued administration of norepinephrine. Shock was progressive and death occurred at 5:10 p.m. on May 17, 1957.

POST MORTEM FINDINGS

At autopsy, the peritoneal cavity contained approximately two liters of dark pinkish-brown transparent fluid. The entire small bowel was considerably distended with the major portion of the jejunum and ileum having a congested serosal surface. There was no apparent exudate present. There was no evidence of fat necrosis, and the pancreas appeared grossly normal. The stomach contained a large amount of reddish-brown, foul-smelling liquid material, but there was no evidence of gastric or duodenal ulceration. The duodenum was considerably distended with bloody material and the remaining portion of the small bowel contained dark reddish-brown, hemorrhagic material throughout.

After removing the contents of the intestine, there was found involving the major portion of the jejunum and practically the entire ileum, a process characterized in some areas by involvement of fairly discrete zones and in others by confluent zones composing great lengths of the small bowel in which there was a dirty, grayish membrane over the markedly congested, beefy-red mucosal surface (Fig. 1). This was more striking in the lower jejunum and ileum. The large bowel contained recent hemorrhagic material. The mucosal surfaces were deep red and congested, but no pseudomembranous exudate was demonstrable.

The combined weight of the lungs was 1,330 grams, and there was evidence of pulmonary hemorrhage, particularly in the right lung. The kidneys weighed 140 grams each. They had pale surfaces with engorged stellate veins, and there was some bulging of the cut surface over the edge of the capsule.

Cultures were made of the heart's blood, surface of the right lung and the small bowel. Cultures of material from the small bowel yielded predominantly hemolytic Staphylococcus aureus, coagulase positive. This organism was also obtained from the cut surfaces of the lung and from the heart's blood.

Microscopical sections confirmed an acute pseudomembranous enteritis in sections of the small bowel. There was a thick, rather tightly adherent membrane composed of fibrin, necrotic debris and inflammatory cells. The mucous membrane showed severe inflammatory reaction and

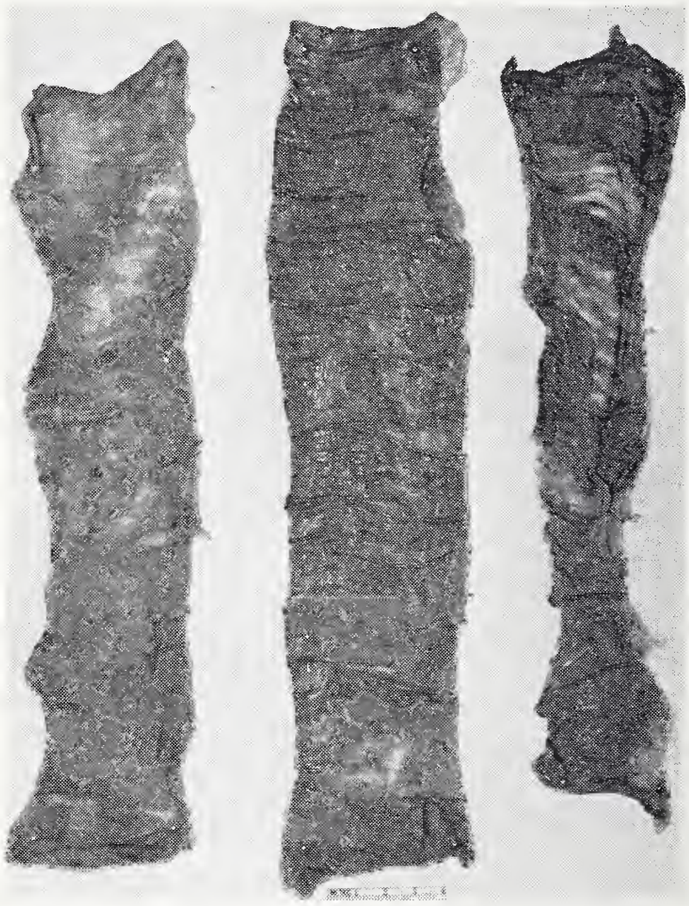

Figure 1. Portions of small intestine showing extensive shaggy pseudomembranous exudate.

hemorrhage. The glandular architecture was obscured by hemorrhage and inflammatory cells. The submucosa showed a very mild inflammatory reaction. Sections of the large bowel showed no definite membrane formation, but again, there was apparent real increase in inflammatory cells with those appearing to be chiefly mononuclear.

Other microscopical findings confirmed the pulmonary congestion and hemorrhage, and there were some degenerative changes in the renal tubules, particularly in the proximal convoluted tubules, thought to be related to the ischemia associated with shock.

The chief pathological diagnoses were: 1) Staphylococcal pseudomembranous entercolitis (chiefly jejuno-ileitis), 2) Ascites, 3) Pulmonary hemorrhage, more marked in the right lung, and 4) Renal tubular degenerative changes, probably associated with circulatory collapse.

SUMMARY

The case of an apparently healthy, 54-year-old white male who succumbed to staphylococcic pseudomembranous enterocolitis of thirty-four hours duration is presented. Clinically, the most important feature was early and profound circulatory collapse. There was no antecedent antibiotic therapy, medical illness, surgery or trauma. Two prior similar cases from the literature are cited. ★★★

1190 North State Street (Dr. Heard)

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CERF-DOM

Bennett Cerf, publisher, author, television personality, and Miss America judge, tells the story of a Dayton, Ohio, obstetrician who has two fixed professional fees for antepartum care and delivery. Invariably, he sends a statement for either $100 or $200.

"Do you inquire into your patients' financial rating before deciding upon your fee?" he was asked.

"Nothing of the sort," replied the doctor. "I base my fee on the first question the father asks when I come out of the delivery room.

"If he asks, 'Is it a boy or a girl?' then he gets a bill for $200.

"But if he asks, 'Is my wife all right?' the bill is $100!"

—Bennett Cerf in *This Week*

SOCIOECONOMICS

The New Era of Aging

M. Q. EWING, M.D.
Amory, Mississippi

Medical progress, in extending the human lifespan, seems to have created a new vehicle for proponents of federal medicine. Problems are acknowledged and recognized but dynamic private, non-federal programs offer sound solutions for aging America. Compulsory retirement, based upon chronological age, is examined and misconceptions upon which the elderly are exiled into social and economic oblivion are analyzed. The positive program in these several connections initiated by the Mississippi State Medical Association is summarized.

A PARADOXICAL BACKWASH of medical progress has ushered in a new era of aging and problems which were unknown two decades ago. Briefly stated, this is the proposition: In less than two generations, the average human lifespan has increased 25 years. As recently as 1948, the average life expectancy was 65 years but today most Americans can expect to exceed their three score and ten. At the moment, there are 15 million Americans over age 65—that's 1 out of 11. By 1970, the count will be 1 out of 10.

Unfortunately, our increasing aged population has become a convenient vehicle for proponents of universal federalism. They have seized upon it as a hungry dog would seize a bone. Physicians have long considered action in the field of aging a matter of vital interest to all segments of American society. We acknowledge that our profession, in contributing to the increased span of life, has an obligation to the beneficiaries of our successful labors. Although our attention naturally centers on health care of the aging, we believe that all should recognize that this is but one aspect of the total area of consideration.

CRISIS IN WASHINGTON

The Forand crisis has compelled us to assume new roles of leadership. Our positive programs and studies have been vastly accelerated. Medical socioeconomics is catching up with medical science.

We make no bones about it: There are problems demanding solution. Without doubt, the most urgent problem facing physician and patient is that of preventing enactment of a faithless expedient in the name of health care. For the aging, the true nature of these problems is simply stated as adjustment to new opportunity, longer life, application of scientific advancement, and continued development of health care facilities and financing mechanisms.

In all areas, American medicine, our insurance industry, the prepayment plans, private organizations, and non-federal governmental agencies are meeting the challenge. Left alone, the job will be done effectively and efficiently by private, non-federal means.

For the physician, chronic illness is the major care difficulty with respect to the aged. In younger individuals, a crippling condition may be found

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Chairman, Committee on Aging, and past president, Mississippi State Medical Association.
Read before the State Medical Legislative Conference, Mississippi State Medical Association, Jackson, November 12, 1959.

in an otherwise healthy body but in an older person, it is often superimposed on the pathology of the aging process. Thus, in older patients, chronic and restorative care rarely can be separated from definitive treatment.

Where there is no pronounced chronic disease, the elderly patient who is acutely ill presents much less of a problem to the physician. We have both the scientific means and care facilities to meet this need effectively and economically.

AMA'S PROGRAM

The American Medical Association's Committee on Aging has developed a magnificent, dynamic program built under a six-point frame of reference. This is:

1. Stimulation of a realistic attitude toward aging.
2. Promotion of health maintenance programs and wider use of restorative and rehabilitative services.
3. Extension of effective methods of financing health care for persons over age 65.
4. Expansion of skilled personnel training programs and improvement of medical and related facilities for older persons.
5. Amplification of medical and socioeconomic research in problems of the aging.
6. Leadership and cooperation in communities' activities for senior citizens.

We feel that programs in the field of aging must be conceived with equal emphasis upon all six points in the AMA frame of reference. Men like Mr. Forand would have you believe that the shortcomings of society can be rectified overnight by passage of a bill to furnish certain health services for the aged at government expense. This simply isn't true.

Every doctor knows that good health means far more than the absence of disease or infirmity. Ideally, it includes the positive state of physical, mental, and social well-being. Ordinarily, physicians can't cure the neuroses of enforced idleness. We can't write out a prescription to remedy loneliness or family rejection. In the main, therapy for social maladies must be administered by the patient's family, friends, church, and community —a complex which we know as society.

RETIREMENT OR EXILE?

When our fellow man reaches his 65th birthday, we should not push him out of life whether he wills it or not. We should not exile him to social and economic oblivion, cut his income to a minimum, and force him into the state of near-pauperism we call retirement. Of course, this is not true for everyone over 65 but for many, this description is an understatement.

There are six primary misconceptions in the chain of error and tortured logic by which America exiles its elderly into social and economic oblivion.

First is the belief that everyone reaching age 65 is washed up, ready to be flunked out of life. Actually, history is rich with examples of men and women who reached their primes after age 65.

The second misconception is that all 15 million old people in the United States are in urgent need of health care, that all are invalids, sick, senile, and bedridden. We know that the majority of our senior citizens enjoy basically good health.

The third misconception is that health care needs are the only needs of the aged. Actually, it is but one in many. It is really our compulsory retirement system which cripples our seniors occupationally, financially, socially, and psychologically because it is based not on individual merit but on chronological age. Society cannot and should not be divided by the definitive quantity of age.

Fourth, charges have been made against the medical profession that physicans are not interested in problems of the aging. This baseless allegation was exploded during the Forand hearings last July.

Fifth, there is the misconception that only the federal government can meet the needs of the aged so we might just as well sit back and let the government take care of everything. This is absurd and ridiculous. The federal government has nothing to give. At best, it can only return a portion of what it takes.

Sixth, some are saying that there is nothing new about old age and they allege that people have been living to exceptional ages since the days of Methuselah. Well, so they have, but the word "exceptional" is the key. Living to old age today is more correctly described as "commonplace." To those who say there's nothing new about old age, ask them what was new 50 years ago.

MSMA'S PROGRAM

The Committee on Aging, a permanent body of the Council on Medical Service, developed a basic program which was approved by our House of Delegates at the 91st Annual Session last May. It is a team approach and involves the cooperative endeavors of many.

Our Blue Cross-Blue Shield plan was one of the first in the nation to offer a prepayment con-

tract for senior citizens. Mr. Richard C. Williams, the executive director, and his associates are to be commended for their foresight and courage. About 20,000 over-65 Mississippians are now covered. The contract benefits follow our traditional patterns of indemnification and we understand that Blue Cross-Blue Shield officials intend to expand its availability.

We have initiated studies with respect to nursing home care availability, licensure, and related problems. We are organizing a lecture team of physicians who will be available to present scientific programs at the local level on care and rehabilitation of the aged.

We are participating actively in the Mississippi Council on Aging and your chairman is serving in the Council organization on the Health Care Committee in preparation for the 1961 White House Conference on Aging. We have meaningful and effective liaison in these several connections with the Mississippi Hospital Association, the Mississippi State Board of Health, and the Commission on Hospital Care. We hope to assist the Mississippi Association of Physical Therapists in enlarging their scope of services to the aged.

The association is engaged in furnishing speakers to medical and non-medical groups to discuss our positive program in the field of aging and our presentations are being warmly received.

We are working with many organizations and agencies to increase the tempo of sound health education programs for the aging in physical and mental health. Regarding medical and related facilities, we are experiencing continued progress in Mississippi which can be favorably compared with that of any state. The new Kuhn Memorial addition to the Vicksburg Charity Hospital offers 100 beds for diagnostic, treatment, and surgical services for the chronically ill and aged. There are solaria on each floor, special occupational, physio- and hydrotherapy departments, and even model home kitchens to retrain female patients for domestic tasks. With no federal funds for care purposes, this facility offers full rehabilitative and restorative services for only $2 a day for indigent patients with rates graduated up to $8 per day for pay patients, the latter assuring full coverage under our Blue Cross-Blue Shield aging contract.

CARE FOR THE INDIGENT AGED

Our meaningful, realistic program for acute care of the indigent under the State Hospital Commission, the charity hospital system, and the University Teaching Hospital offer 256,000 patient days of care annually without federal funds and at no cost to the state for professional services rendered by physicians. Your Council on Medical Service will be working vigorously in a team effort with the Mississippi Hospital Association and others to improve the quality of this care and expand the scope of the program.

We recognize that only the surface has been scratched and that much remains to be done. With our good beginning, we are working to assist all concerned in finding and implementing the most effective, desirable means by which to accomplish our worthy goals. This we can do, must do, and will do. And it will be done by non-federal means.

THE SOUNDEST VIEW

Dr. Edward L. Bortz of Philadelphia, Pennsylvania, a Past President of the American Medical Association who is 66 years old, sums it up like this:

"As man awakens to a greater awareness of himself, with increasing control of his environment, the new dimension of added years will have new meaning.

"To live nobly, triumphantly, to stay young and responsive, and to die at a ripe old age—is that not our primary goal? Isn't it appropriate that, as man's body strength wanes, his spirit should continue to grow? In these turbulent times, it is essential that society should capitalize on the developed potentials of its mature citizens, our best asset for the future security of the nation."

★★★

The Amory Clinic

HOME CALLS

In making house calls 50 per cent of the physician's time is spent in reaching the patient's home. Most physicians charge for excessive travel time and distance.

JOURNAL OF THE
MISSISSIPPI STATE
MEDICAL ASSOCIATION

Volume I, Number 1

January 1960

EDITORIALS

"Volume I, Number 1"

WITH THIS FIRST ISSUE, a new state medical journal is born and the Mississippi State Medical Association has initiated another service for and in behalf of its members. This has been neither a casual nor lightly considered undertaking for there are grave responsibilities upon journalism's pen whether wielded for the scientific or popular press. Moreover, this JOURNAL enters distinguished company on the day of its birth because the American scientific press, as is true of the American newspaper and magazine press, is without a peer. Thus, JOURNAL MSMA must earn its place by the exercise of responsibility, diligence, and dedication.

This JOURNAL is the property of association members and its fortunes shall be theirs to direct. It will aspire to journalistic character but its will and initiative shall be only those imparted by the members through established governing mechanisms. In creating the JOURNAL, the House of Delegates directed that it shall be published under the supervision of the Board of Trustees, the association's real and acknowledged managers.

The Board has charged that the JOURNAL shall be a scientific and socioeconomic vehicle especially adapted to the needs of the association, a reliable, authoritative communications medium among the membership, attractive in format, easily and highly readable, and a publication containing a sufficient variety of presentations and information to achieve wide usefulness. The Board cautioned that the JOURNAL shall not attempt to compete with publications of the American Medical Association or be utilized for purposes other than those serving association interests. It shall not be utilized as a means to create policy or to suggest deviation from established policy.

Whatever is lacking in quantity will be sought in quality. Recognizing that no popular or scientific publication can be all things for all purposes, the JOURNAL must strive above all else for integrity to reflect an image of the men and women of medicine, for authority to represent the physician's professional attainment, for diligence to show medicine's dedication, and for versatility and vigor to match the doctor's drive and energy. And because of these precepts and goals, the JOURNAL has a nativity of boundless potential. It is not now nor will it ever be faultless but its mightest effort will be to rise to usefulness and to overcome mistakes and undoing.

The JOURNAL is the work of a team. Some must wear the titles and carry specific responsibilities but the team roster is open and every association member is invited to join. The JOURNAL will be as good as the membership wants it to be and successful in proportion to individual and total contribution. The association's one hundred three years of dedication, dignity, and service can't be magically imparted to a fledging of paper and ink. But time and trial, patience and effort will be unspared in determination to be worthy of the name at the masthead.—R. B. K.

MEDICAL CARE FOR THE INDIGENT

The medical profession of Mississippi has always felt a serious responsibility for and interest in the care of the sick or injured indigent. The ethical practitioners of this state have never failed to respond to the call to render medical aid at no expense to the patient or the government. Physicians have not been paid, are not now paid, and do not anticipate being paid for professional services rendered to the indigent. Our concern is primarily that of adequate hospital care.

We believe that hospital care for the indigent in Mississippi can be improved. We believe that this care is a community and state responsibility and that the federal government has no place in this problem.

Our present program consists of (1) the State Hospital Commission fund for care of the indigent in the community hospitals at the rate of $6 per day ($3 per day added for cancer cases) for those cases certified as indigent; there is a state appropriations of $1,500,000 per biennium for this purpose; (2) the University of Mississippi Teaching Hospital at Jackson which has a bed capacity for indigents of 175 (having never been fully occupied); and (3) the four state-owned and maintained charity hospitals at Vicksburg, Natchez, Meridian, and Laurel. The community hospitals of these four counties, Warren, Adams, Lauderdale, and Jones as well as Hinds where the University Hospital is located are not eligible to participate in the State Hospital Commission program.

Now, it seems from the face of the matter that we should be able to provide hospital care of the truly indigent throughout the state but this does not, in fact, work out.

Because of the selective method of procuring cases for teaching in the University Hospital as well as the plan to obtain paying cases to aid in their budget, the usual run of sick or injured indigent cases requiring hospital care cannot be placed therein. Since the other hospitals in Hinds County are not eligible under the indigent hospitalization law, such cases must suffer or attempt to be placed elsewhere which is very difficult to do at times.

There have been some several plans advanced by different groups in an effort to solve the problem:

(1) Build additional charity hospitals on the Gulf Coast and in northwest, northeast, and north Mississippi.

(2) Increase the basic *per diem* from $6 to $8 under the hospital commission expenditures so that increased costs of hospitalization may be more realistically met.

(3) A more realistic determination of those who are indigent by cooperative work in the community of the physician, county welfare workers, and county officials.

(4) Making the hospitals available for indigent care under the hospital commission program where there are no available beds in the four charity hospitals or the University Hospital.

(5) Secure the cooperation of the National Foundation, Heart Association, Cancer Society, and others to contribute $2 per day or more if needed on special cases coming within the category with which they are concerned.

(6) An over-all plan to provide hospital care in the area of residence of the indigent because of economic factors.

(7) A plan to acquaint the community with its responsibility and urge them to assume the responsibility of hospital care for the indigent with state financial aid.

(8) A plan to provide for the transfer of special cases, as certified by the attending physician, to the various centers of the state where specialists are available in the various categories of eye, heart, bone, cancer, lung, and other diseases such as Jackson, Vicksburg, Meridian, Hattiesburg, the Gulf Coast, Greenwood, Greenville, Clarksdale, Tupelo, etc.

(9) A plan to provide additional financing by a county tax based on the school equalization law.

With all these ideas being brought forth by interested parties and agencies, there should be presented to the Governor and Legislature enough concise information so that a more satisfactory program for hospitalization of the indigent will result therefrom, realizing that the ethical medical profession will continue to donate their services in these unfortunate cases.—L. W. L.

WELCOME, MR. BOSERMAN!

Almost every month, more than 200,000 American physicians interrupt serious medical journal study to chuckle with William H. Boserman, one of the foremost contemporary humorists. Expressing himself mostly on medical subjects, the Garnett, Kansas, artist pokes fun at and with physicians and their patients in the pages of the *Journal of the American Medical Association, Medical Economics,* and other prominent national scientific journals.

His cartoons are more sympathetic than satirical because he seems to grasp the lighter side of situations which might not otherwise tickle a funny bone. The physician whose nose is oversize and the nurse with an undersize uniform are his trademarks. The editors are pleased to have secured his talented services and hope JOURNAL readers will find a smile in these pages devoted mainly to the serious side of medicine.

That's why we say, "Welcome, Mr. Boserman!"

NATIONAL AND REGIONAL

American Medical Association, June 13-17, 1960, Miami Beach. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago 10, Ill.

Southern Medical Association, October 31-November 3, 1960, St. Louis. Mr. V. O. Foster, Executive Secretary, 2601 Highland Ave., Birmingham 5, Ala.

American College of Surgeons, Sectional Meeting, January 21-23, 1960, Louisville, Ky. H. Prather Saunders, Associate Director, 40 East Erie St., Chicago 11, Ill.

American Academy of General Practice, March 19-24, 1960, Philadelphia. Mr. M. F. Cahal, Executive Secretary, Volker at Brookside, Kansas City 12, Mo.

STATE AND LOCAL

Mississippi State Medical Association, May 10-12, 1960, Jackson. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson, Miss.

Mississippi Academy of General Practice, September 28-29, 1960, Jackson. Miss Louise Lacey, Executive Secretary, Walthall Hotel, Jackson, Miss.

Amite-Wilkinson Counties Medical Society, First Tuesday March, June, September, December. S. E. Field, Centreville, Miss., Secretary.

Central Medical Society, First Tuesday Monthly, 6:30 p.m., Robert E. Lee Hotel, Jackson, Miss. C. G. Sutherland, 918 N. State St., Jackson, Miss., Secretary.

Claiborne County Medical Society. D. M. Segrest, Port Gibson, Miss., Secretary.

Clarksdale and Six Counties Medical Society, Fourth Wednesday March and September, 2:00 p.m., Clarksdale, Miss. Robert R. McGee, 150 Yazoo St., Clarksdale, Miss., Secretary.

Coast Counties Medical Society, First Wednesday March, June, September, and November. Charles N. Floyd, 1412-23rd Ave., Gulfport, Miss., Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Miss., Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando, Miss. L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, Second Tuesday Monthly. A. Wayne Sullivan, 1204-21st Avenue, Meridian, Miss., Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Monthly, 7:30 p.m., Natchez Country Club, Natchez, Miss. W. T. Colbert, 539 Park Place, Natchez, Miss., Secretary.

North Central District Medical Society, Second Wednesday March and September. W. A. Middleton, 214 Summit St., Winona, Miss., Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December, Tupelo, Miss. Eugene M. Murphey, III, 421 Main St., Tupelo, Miss., Secretary.

North Mississippi Medical Society, First Thursday January, April, and October, Oxford, Miss. R. L. Wyatt, Holly Springs, Miss., Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. George B. Stewart, 215 Kirkwood St., Picayune, Miss., Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. Thomas F. Puckett, 715 Arledge St., Hattiesburg, Miss., Secretary.

Tri-County Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Miss., President.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg, Miss. Thomas H. Mitchell, The Street Clinic, Vicksburg, Miss., Secretary.

Number of cancer deaths among children under 15 has risen from 1948 total 2,750 to 4,100 in 1957 or 50 per cent. Leukemia accounts for 45.2 per cent with brain cancer second, 21.3 per cent.

THE NEWEST IN BOOKS

BIOPSY MANUAL by James D. Hardy, M.D., Professor and Chairman of the Department of Surgery, University of Mississippi School of Medicine, James C. Griffin, Jr., M.D., Assistant Instructor in Surgery, Administrative Chief Resident in Surgery, National Cancer Institute Trainee, University of Mississippi School of Medicine, and Jorge A. Rodriguez, M.D., Assistant Professor of Surgical Anatomy, the Department of Surgery, University of Mississippi School of Medicine. Cloth, $6.50. Pages 150 with 54 illustrations. W. B. Saunders Company, Philadelphia, Pennsylvania.

A well presented, timely, and well illustrated manual presenting the use and abuse as well as the pitfalls of obtaining material to confirm diagnosis or to make an initial diagnosis in suspected lesions of the human body.

Emphasis is given to obtaining a non-mutilated specimen, fixed quickly and preserved to aid the pathologist in making a satisfactory determination from the material to aid the surgeon. Simplicity of instruments and fixative solutions are elaborated upon.

Initially, the skin and lips are discussed as to both incisional and excisional biopsy as are the nose, mouth, sinuses, and pharynx. Outlined in detail are the several endoscopic methods of obtaining material for diagnosis from suspected lesions of the pharynx, larynx, bronchus, esophagus, and stomach by direct or indirect vision and to securing material directly or by washings.

The lymphatics of the neck usually furnishes information about the face, thyroid, mouth, pharynx, esophagus, lung, and sometimes the stomach. They offer a ready source of material with few hazards as outlined by the authors.

The breast, one of the most frequent parts biopsied, as well as the chest and thorax are well presented.

The abdomen with its contents, as well as the retroperitoneal organs and structures often present complications in biopsy and such is well discussed.

Both the female and male organs with the readily available use of the Papanicolaou stain are discussed as another frequently biopsied part while the last chapter deals with the procurement and study of the bone marrow, muscle, veins, and venous emboli.

For the trainee, it is an excellent outline; for the accomplished surgeon, it offers points for remembering; and for the general practitioner, it is a good ready reference.

FOREIGN JOURNALS

B.C.G. and Vole Bacillus Vaccines in the Prevention of Tuberculosis in Adolescents. Second Report, to the Medical Research Council, Brit. M. J. 2:379-395, Sept. 12, 1959.

Some 56,700 school children, age 14 to 15½ years, in various parts of urban and suburban England volunteered for the trial. All were tuberculin tested and had x-rays of the chest. Cases of tuberculosis were excluded from the group. The remainder were divided at random into a vaccinated and an unvaccinated group. The task of followup was a huge one but was apparently successful. Whenever anyone in the trial groups developed a disease which might be tuberculosis, all the details of the case were submitted to an independent assessor who did not know the vaccination status of the individual. His decision on the case was final. The tuberculin negative children who received B.C.G. vaccinations had an attack rate of 0.38 per 1,000 in the first five years, while the attack rate in the unvaccinated tuberculin negative children was 2.29/1,000. The reduction in tuberculosis in this group thus was 83 per cent. The few cases of miliary tuberculosis and tuberculous meningitis all occurred in the unvaccinated group.

It seems clear, then, that under the conditions of this well controlled large scale field trial, B.C.G. vaccine proved highly effective.

This reviewer believes this is additional strong confirmatory evidence that B.C.G. vaccine is of value in tuberculin negative individuals who are at moderate risk of developing clinical tuberculosis.

Six million people in the U. S. visit their physician for hypertension and comprise about 4 per cent of all visits to physicians. Seventy per cent are women.

MEDICAL ORGANIZATION

LEGISLATIVE CONFERENCE

More than one hundred state and local medical leaders heard ten speakers discuss key issues before current sessions of the Congress and state legislature during MSMA's state medical legislative conference at Jackson, November 12, 1959. The program was highlighted by appearances of Hon. John Bell Williams, Raymond, and Hon. (Dr.) Dale Alford, Little Rock, members of Congress from Mississippi and Arkansas, respectively.

A four-member panel traced the evolution of the Social Security program from enactment in 1935 through current efforts by Mr. Aime J. Forand (D., R.I.) and others to include medical service benefits under federal sponsorship with compulsory tax support in the heretofore dollar benefit program. Panel members included Drs. C. D. Taylor, Jr., Pass Christian, member of the Board of Trustees; George E. Twente, Jackson, member, AMA Council on Legislative Activities; M. Q. Ewing, Armory, chairman, Committee on Aging; and Mr. Rowland B. Kennedy, Jackson, Executive Secretary.

Dr. H. H. McClanahan, Columbus, chairman of the association's Board of Trustees, moderated the panel and presided over a question-and-discussion period.

HILL, HICKS PRESIDE

Presiding over general conference sessions were Dr. Stanley A. Hill, Corinth, president, and Dr. G. Swink Hicks, Natchez, president-elect. Hill keynoted the meet, delivering an address entitled, "Crisis Now."

Featured speakers also included Drs. Lawrence W. Long and C. G. Sutherland, both Jackson, who spoke on "The Mississippi State Legislature and Medicine—1960" and "Political Action by Physicians." Congressmen Williams and Alford shared a panel spotlight after Dr. Alford spoke on "A Doctor Looks at Congress." Dr. William E. Lotterhos, Jackson, chairman, Council on Legislation, summarized the meeting and presented an audio-visual recording of an address by Dr. Louis M. Orr, Orlando, Fla., president of the American Medical Association.

Association officials urged component medical societies to sponsor local legislative meetings using materials made available during and subsequent to the conference. A limited number of copies of addresses delivered are available from MSMA's executive offices, Jackson.

THE WASHINGTON BYLINE

Within the week, the second session of the 86th Congress shall have convened at the nation's capital, the downhill race toward the 1960 presidential election. Informed observers are predicting a heavy push on welfare and vote-bait issues. Labor union regulation, the really big concern in the first session, will be less pressing after passage of the Landrum-Griffin bill.

Probably the most critical issue with which medicine will be faced is Forand-type legislation, still very much alive and pending in the House and Senate. Hearings were held last July by the House Committee on Ways and Means which would

(Turn to page 27)

"Local or general? I dunno . . . how talkative is she?"

"May 11, 1915"

STANLEY A. HILL, M.D.
Corinth, Mississippi

The President Speaking

"Now, in conclusion, allow me to urge upon you the necessity of cooperation by the entire membership of this body if we are to accomplish anything. I refer not only to the legislative programme suggested above but also to the general activities of this association. As a rule, there is only a sporadic effort on the part of all concerned just before the meeting of this association each year. How much more could be accomplished if we worked persistently, and without undue haste or hurry throughout the year! If we are to accomplish anything by education of the public, we must be continually at work. *Sustained effort* must be our slogan."

This was the conclusion of J. S. Ullman's presidential address in Hattiesburg, Tuesday evening of the annual session of our association in 1915. Forty-five years have wrought many changes and improvements in the organization. However, little of the above quotation need be altered to adapt it to January 1960. After calculating that more of our members do more organizational work throughout the year than was the case in the World War I period, then the words of Dr. Ullman may, to advantage, be received as a current charge. And may we employ more the word "more." More of the 1960 members are needed to do more and sustained work for the association.

The recent enthusiastic legislative conference at Jackson was excellent preparation for both the current session of the legislature and the second session of the 86th Congress. Each association member can render worthwhile service by frequent contacts with the lawmakers.

It has been proved that weekly conferences with the representatives and senators pay off. The challenge is here. During the weeks ahead we must keep informed and advise the members of the Legislature in order that the best interest of Mississippi may be served. The Mississippi medical citizen will readily think of specific areas and items of legislation in which his help may be needed. Although there are several bills of medical interest, it is not necessary to draw attention to any particular one. Let us work daily and untiringly in the best interest of the state of Mississippi.

permit the bill to be brought to the floor for debate by a simple majority vote of the committee.

FORAND TO ALTER TACTICS

Capitol hill onlookers as well as medical leaders believe that Mr. Forand will amend his own bill to delete physicians' services, leaving only hospitalization for the aged as a federal, tax-supported benefit. One of the bill's foremost proponents, Dr. Wilbur Cohen, professor of Public Welfare Administration, University of Michigan, stated that it's easier to handle 7,000 hospitals than 185,000 physicians.

Most state medical associations agree that, regardless of amendments, the Forand principle of federal compulsion shall have not been altered in the slightest. Opposition by medical organization to H.R. 4700 and similar measures will contine as will its positive program for providing care for the aged by non-federal means.

THE MISSISSIPPI LEGISLATIVE SCENE

Jackson soon becomes the focus of state governmental and political activity with the gubernatorial inauguration and regular session of the legislature coming up early on the January agenda. Business before the newly elected lawmakers will be routine and organizational pending Governor-elect Barnett's formal inauguration and presentation of his program to the new session.

Pre-session buzzings around New Capitol hill indicated issues of medical interest may emerge into the forefront early in the session. The association has a stated legislative program and will monitor every introduction in the House of Representatives and Senate.

CULTISM AGAIN

Members of both houses of the legislature say they've been contacted by chiropractors, given subscriptions to chiropractic journals and magazines, and have received all sorts of mail from these cultists. Chances are good for the introduction of another chiropractic licensure law and for another all-out fight to hold the line with Louisiana, Massachusetts, and New York, the only states except Mississippi, which do not accord chiropractic licensure.

The success of chiropractic obviously depends upon licensure at the state level. Since its tenets are not demonstrable scientifically, a license is the only formal recognition possible. Historically, the chiropractors' approach to licensure has been one of seeking what they call "regulation and policing."

Over and over again, they repeat the tired, weary argument that only qualified, trained chiropractors should be licensed. Some may be lulled into believing that since there are chiropractors anyway, the best thing to do would be to see that only those properly trained be permitted to practice. The argument is false and untenable.

DOGMA FALSE

Since the dogma of chiropractic is completely false and empty from every standpoint of science and logic, licensure cannot and will not make a bad thing good. The *status quo* so fervently supported over the years by the late Dr. Felix J. Underwood is the best of all possible means for meeting problems of cultism. Medical practice violations may now be prosecuted and hardly a year goes by without a successful court action.

NEEDED APPROPRIATIONS

The association has stated that it supports adequate appropriations for the Mississippi State Board of Health and the University of Mississippi School of Medicine. Legislators recognize the roles of importance played by these agencies as do physicians.

"She wants to know what to do about that over-taxed feeling!"

NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association since June 1, 1959:

ALVIS, JOEL LAWRENCE, Jackson. Born Memphis, Tennessee, May 1, 1923; M.D., University of Tennessee, Memphis, 1953; interned Christ Hospital, Cincinnati, Ohio; surgical residency, Louisville General Hospital, Louisville, Kentucky, 6 months; urology residency, John Gaston Hospital, Memphis, Tennessee, 3 years, and University Medical Center, Jackson, Mississippi, 6 months; U. S. Army, 1943-1946; elected April 7, by Central Medical Society.

BANAHAN, BENJAMIN FRANKLIN, JR., Jackson. Born Shreveport, Louisiana, January 9, 1933; M.D., Tulane University, New Orleans, 1957; interned University Medical Center, Jackson, Mississippi; preventive medicine residency, University Medical Center, Jackson, Mississippi, 1 year; elected April 7, by Central Medical Society.

BENNETT, JOHN FREDERICK, Greenville. Born Evansville, Indiana, December 9, 1923; M.D., University of Tennessee, Memphis, 1953; interned Erlanger Hospital, Chattanooga, Tennessee; pediatric residency, General Hospital, Washington, D. C., 1 year, and Charity Hospital, New Orleans, Louisiana, 1 year; elected October 14, by Delta Medical Society.

COCKRELL, WAYNE POE, Magee. Born West Point, Mississippi, October 1, 1931; M.D., Harvard University, Boston, 1956; interned University Medical Center, Jackson, Mississippi; Marine National Guard February 1957 to present; elected May 5, by Central Medical Society.

EAST, ISAAC COOPER, Whitfield. Born Toccopola, Mississippi, December 12, 1905; M.D., University of Arkansas, Little Rock, 1931; interned Grady Memorial Hospital, Atlanta, Georgia; postgraduate course in gastroenterology, New York Post Graduate Hospital and Medical School, 14 weeks; postgraduate course in psychiatry, Columbia University and New York State Psychiatric Institute, 3 months; Fellow, American Psychiatric Association; U. S. Army, 1945-1946; elected April 7, by Central Medical Society.

EGGERS, EARL MUSGROVE, Natchez. Born Alexandria, Louisiana, December 23, 1925; M.D., Louisiana State University, New Orleans, 1954; interned White Cross Hospital, Columbus, Ohio; pathology residency, Sparrow Hospital, Lansing, Michigan, 1 year, Detroit Receiving Hospital, Detroit, Michigan, 2 years, and Louisiana State University, 1 year; elected April 25, by Homochitto Valley Medical Society.

GOODE, PAUL EDWARD, Jackson. Born Gadsden, Alabama, February 14, 1925; M.D., Tulane University, New Orleans, 1948; interned Charity Hospital, New Orleans, Louisiana; U. S. Army 1949-1952; elected June 2, by Central Medical Society.

HYMAN, ORREN WILLIAMS, JR., Jackson. Born Memphis, Tennessee, April 12, 1925; M.D., University of Tennessee, Memphis, 1952; interned University of Kansas Medical Center, Kansas City, Kansas; fellowship in radiology, Mayo Clinic, Rochester, Minnesota, 4 years, 3 months; assistant scientist, Oak Ridge Institute of Nuclear Studies, 7 months; diplomate, American Board of Radiology; member, American College of Radiology and Radiology Society of North America; currently instructor in radiology, University Medical Center, Jackson, Mississippi; elected April 7, by Central Medical Society.

MAGEE, LOUIS MCNAIR, Gulfport. Born Jefferson Davis County, Mississippi, November 28, 1903; M.S., Tulane University, New Orleans, 1928; interned Touro Infirmary, New Orleans, Louisiana;

"I'll be glad when you're well, Mrs. Brown. . . . I'd like to retire and turn the office over to the boy."

U. S. Navy 1942-1946; presently a Federal Medical Officer in admission service, V. A. Hospital, Gulfport; elected June 3, by Coast Counties Medical Society.

NAEF, RICHARD WICK, Jackson. Born Jackson, Mississippi, October 8, 1927; M.D., Jefferson Medical College, Philadelphia, 1953; interned Pennsylvania Hospital, Philadelphia, Pennsylvania; neurology residency, Jefferson Medical College Hospital, Philadelphia, Pennsylvania, 3 years; psychiatry residency, Pennsylvania Hospital, Philadelphia, 2 years; member American Academy of Neurology and American Psychiatric Association; U. S. Navy 1945-47; presently Assistant Professor of Medicine and Psychiatry, University Medical Center, Jackson, Mississippi; elected October 6, by Central Medical Society.

ROSS, EDWARD VICTOR, Yazoo City. Born Picayune, Mississippi, February 10, 1931; M.D., Tulane University, New Orleans, 1957; interned Touro Infirmary, New Orleans, Louisiana; general practice residency, Huey P. Long Charity Hospital, Pineville, Louisiana, 1 year; elected October 6, by Central Medical Society.

SIMMONS, THOMAS HENRY, Leland. Born Meridian, Mississippi, May 5, 1927; M.D., University of Mississippi, Jackson, 1958; interned Moses H. Cone Memorial Hospital, Greensboro, North Carolina; U. S. Navy 1945-46; elected October 14, by Delta Medical Society.

STEPHENS, JOSEPH WILLIAM, Natchez. Born Ripley, Mississippi, April 11, 1925; M.D., University of Tennessee, Memphis, 1955; interned Mobile County Hospital, Mobile, Alabama; residencies, County Hospital, Mobile, Alabama, 6 months, St. Joseph's Hospital, Memphis, Tennessee, 6 months; currently in 2 year residency at Natchez Charity Hospital, Natchez, Mississippi; elected April 25, by Homochitto Valley Medical Society.

STERN, CHARLES, Natchez. Born Shreveport, Louisiana, December 17, 1928; M.D., Louisiana State University, New Orleans, 1952; interned Charity Hospital, New Orleans, Louisiana; general practice residency, Charity Hospital, Lafayette, Louisiana, 6 months; ophthalmology residency, V. A. Hospital, New Orleans, Louisiana, 3 years; elected April 25, by Homochitto Valley Medical Society.

WILLEY, LOYS WILLIAM, JR., Forest. Born Morton, Mississippi, February 8, 1932; M.D., University of Tennessee, Memphis, 1957; interned John Gaston Hospital, Memphis, Tennessee; elected June 2 by Central Medical Society.

LETTERS

SIRS: It is a pleasure to send greetings and good wishes to the men and women of our Mississippi medical profession upon the occasion of their Association's publication of the new JOURNAL.

I hope that this scientific instrumentality will be meaningful in the total, humane war you are waging against injury and disease.

ROSS R. BARNETT
GOVERNOR-ELECT
STATE OF MISSISSIPPI
JACKSON, MISS.

SIRS: The advent of your new JOURNAL is evidence of your active partnership in the total dedication of American medicine for scientific progress and the best medical care for every citizen. In these turbulent days when this dedication is threatened by unwise, politically-inspired legislation, it is doubly important that every scientific and socio-economic communications medium achieve maximum effectiveness.

In behalf of the American Medical Association, I send my congratulations to Mississippi physicians in this new and important undertaking. I hope that the new publication will assist in further realization of medicine's ideals.

LOUIS M. ORR, M.D.
PRESIDENT
AMERICAN MEDICAL ASSOCIATION
ORLANDO, FLA.

SIRS: Mississippi medicine marches modestly ahead marking another milestone of progress with its newly owned medical monthly. It is with pride that the 1959-60 administration salutes the JOURNAL and invites the support of every individual member. In turn, every reader will broaden his current medical knowledge and proportionately, the quality of medical care will be enhanced.

STANLEY A. HILL, M.D.
PRESIDENT
MISSISSIPPI STATE MEDICAL ASSOCIATION
CORINTH, MISS.

V.D. increased 10 per cent among teen-agers from 1957 to 1958. Gonorrhea has increased while syphilis has decreased.

DEATHS

CROCKETT, ROBERT NEWTON, SR., Woodville; M.D., Memphis Hospital Medical College, Memphis, 1911; interned Memphis General Hospital, Memphis; postgraduate work Mayo Clinic, Rochester, and Charity Hospital, New Orleans; health officer for 15 years; Emeritus member of M.S.M.A. since 1955; died at Field Community Hospital, Centreville, July 26, aged 77.

KIRK, ROBERT DIXON, JR., Tupelo; M.D., New York University, New York, 1922; Fellow, American College of Surgeons; died at Parkland Memorial Hospital, Dallas, November 16, aged 60.

MCCALIP, HUGH LONG, Yazoo City; M.D., Vanderbilt University, Nashville, 1914; health officer for 32 years; died at King's Daughter's Hospital, Yazoo City, November 30, aged 68.

MOSBY, CHARLES PORTER, Meridian; M.D., Hospital College of Medicine, Louisville, 1904; Emeritus member M.S.M.A. and member 50 Year Club; died October 9, aged 84.

NICHOLS, VIRGIL NEWTON, Carson; M.D., Memphis Hospital Medical College, Memphis, 1904; served as Major in World War I; died at Jefferson Davis County Hospital, June 6, aged 83.

PERRY, JOE REID, Rolling Fork; M.D., Tulane University, New Orleans, 1904; died September 22, aged 81.

PORTWOOD, HILLARY ARMOUR, Schlater; M.D., College of Physicians and Surgeons, St. Louis, 1912; interned Jefferson Hospital and Sanatorium, St. Louis; died at Greenwood Leflore Hospital, September 9, 1959, aged 76.

REED, WOODIE NATHANIEL, Amory; M.D., Memphis Hospital Medical College, 1901; postgraduate work New York, New Orleans, and Chicago; health officer for 7 years; superintendent and chief of staff at Gilmore Sanitarium, Amory; died June 30, aged 82.

RUSSELL, GROVER CLEVELAND, Jackson; M.D., Tulane University, New Orleans, 1909; postgraduate work at Tulane, Washington University, and Mayo Clinic; health officer for 8 years; served as officer in U. S. Public Health Service during World War II; Emeritus member of M.S.M.A. since 1958; died June 8, aged 59.

SLACK, JAMES AYLMER, Friars Point; M.D., Tulane University, New Orleans, 1905; served as Major during World War I; Emeritus member of M.S.M.A. since 1955; member 50 Year Club; died July 19, aged 77.

WILLIAMS, HIRAM GRIFFITH, Prentiss; M.D., Atlanta College of Physicians and Surgeons, Atlanta, 1902; served as examining physician for draft boards during World War I and II; Emeritus member of M.S.M.A. since 1955; member 50 Year Club; died at Jefferson Davis County Hospital, November 12, aged 84.

ZELLER, RAYMOND BRYANT, Hazlehurst; M.D., Jefferson Medical College, Philadelphia, 1927; interned Mississippi State Hospital, Jackson; postgraduate work, Tulane; secretary Tri-County Medical Society and member of M.S.M.A. House of Delegates 24 years; member, Board of Directors, Mississippi State Historical Society; listed in three latest volumes of *Who's Who in South and Southwest;* died June 4, aged 59.

MOORE, CHRISTOPHER COLUMBUS, Itta Bena; M.D., University of Georgia, Augusta, 1902; died at Greenwood Leflore Hospital, Greenwood, October 31, aged 77.

RATCLIFF, MARION DEKALB, Auburn; M.D., Memphis Hospital Medical College, Memphis, 1906; died October 26, aged 85.

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February 1960

JOURNAL of the Mississippi STATE MEDICAL ASSOCIATION

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The test—you might say the acid test—of an anticholinergic is simple: will it protect your patient from hyperacidity around the clock, **even while he sleeps.** The weakness of t.i.d. or q.i.d. preparations is well recognized; but even some "b.i.d." encapsulations may be unreliable. McHardy, for instance, found a "widely variable duration of action, definitely less than that anticipated" in the "sustained," "delayed," and "gradual release" anticholinergics he studied.[1]

COMPARE THE DATA ON ENARAX . . . the new combination of an **inherently** long-acting anticholinergic (oxyphencyclimine) and Atarax, the non-secretory tranquilizer. Note the effectiveness of oxyphencyclimine:

OBSERVE THE OXYPHENCYCLIMINE REPORTS . . .

McHardy: "[Oxyphencyclimine] has proved to be an excellent sustained-action anticholinergic in our study of this agent over a period of eighteen months."[1]

Kemp: ". . . for the majority of patients, one tablet every 12 hours provided adequate control. This characteristic long action . . . may constitute an advantage of this drug as compared to coated 'long-acting' preparations of other compounds."[3]

Add Atarax to this 12-hour anticholinergic. The resulting combination—ENARAX—now gives relief from emotional stress, in addition to a reduction of spasm and acid. Atarax does not stimulate gastric secretion. No serious adverse clinical reaction has ever been documented with Atarax.

LOOK AT THE RESULTS WITH ENARAX[4,5]:

Does the medication you now prescribe assure you of all these benefits? If not, why not put your next patient with peptic ulcer or G.I. dysfunction on therapy that **does.**

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A SENTRY FOR THE G.I. TRACT

NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

February 1960

Dear Doctor:

During closing hours of his administration, Governor J. P. Coleman reappointed three Mississippi physicians to 6-year terms on State Board of Health. All nominees of MSMA, they are Drs. S. E. Field, Centreville, Harvey F. Garrison, Jr., Jackson, and Joseph G. McKinnon, Hattiesburg.

> MSMA nominates 3 members for each of 8 SBH seats under an 83-year old law. Remaining slot goes to D.D.S. member named by Mississippi Dental Association. Because of odd-year tenures, newly inaugurated Governor Ross Barnett won't have opportunity to make SBH appointments until 1962.

All but lost in year end news was the death of Maine's governor, Clinton A. Clauson, on December 29 at Augusta. The fire-eating chief executive was a chiropractor by trade, the only one ever to head a state government. When fatally seized by cerebral hemorrhage, he was attended by two doctors of medicine.

Mississippi Heart Association says it will soon award 1960-61 cardiovascular research grants to non-profit institutions for support of approved investigations. Prospective applicants were reminded that grant requests must be received by March 1. Awards will be announced July 1.

After watching a local TV showing of an AMA public service film, a New Orleans housewife spent a recent evening answering her telephone. Seems that the show title, "WHitehall 4-1500," AMA's main switchboard at Chicago, is also that of her residence phone. Theme of show is how AMA responds to local calls.

The distinguished Republican co-author of H.R. 10, voluntary retirement plan for the self-employed, Richard M. Simpson, died on the eve of Congress' new session. The ranking minority member of the House Ways and Means Committee, he was a strong foe of Forand-type legislation and a veteran of 21 years in office.

Sincerely,

Rowland B. Kennedy
Executive Secretary

McCall's Continues Anti-Physician Campaign With Fee Blast

Dayton, Ohio - Most recent swipe at American medicine from the McCall Corporation is in January Redbook, aptly named semi-pulp monthly, entitled "Why Doctors Charge So Much." Another product of Richard Carter, author of the biased book, The Doctor Business, the article portrays doctors as ghost surgeons, insurance gougers, and fee splitters while pleading federal medicine and closed panel plans. Paradox is that McCall Corporation, after two such attacks on medical practice in four months, still has multi-million dollar contract to print Journal AMA.

Holiday Fireworks Toll High In State

Jackson - One nine-year old boy is dead and a dozen other capitol city youngsters remain injured from Christmas-New Years fireworks accidents as similar reports point up recent holiday season tragedies in nearly all sections of the state. Many serious mishaps involve injuries to face, eyes, and hands. A $25,000 suit is pending in Hinds County seeking damages for personal injury and property loss from a fireworks stand explosion. Most municipalities have ordinances banning sale and use of fireworks but state has no such law.

New Court Ruling May Set Precedent On Hospital Injury Cases

Albany, N. Y. - The Empire State's supreme court may have set a new precedent on liability assessment when patients are injured by faulty hospital equipment. Ruling excludes physicians from sharing liability under stated circumstances. Case in point was a suit for injury received from a faulty operating room lamp during a surgical procedure. Plaintiff joined surgeon because lamp was in use under his professional supervision. The court held that hospital was negligent but that plaintiff failed to show surgeon's "...operative procedure was other than that customarily utilized." Result: The hospital had to pay $8,500 and the doctor was completely exonerated. Citation is Stafford v. St. Clair's Hospital, 189 N.Y.S. 2d 351 (N.Y., June 15, 1959).

Popular Magazine Makes 'Medical Prognostications' For 1960

New York - Parade Magazine, mass circulation Sunday newspaper supplement, surprised the world of journalism with a "just-for-fun" prediction of 1960's major headlines which may prove considerably accurate. The peek into the new years events ranges from politics through space achievement to medical science. Parade editors forecast new and better weight-reducers for use under medical supervision, better diagnostic techniques for rheumatic fever and poliomyelitis, new advances in cardiovascular surgery, better drugs for relief of premenstrual tension, and new methods for measuring body's radioactive content. Most pessimistic prediction - from medicine's viewpoint - was that Congress will pass S.J. Res. 41, international "foreign aid" medical research program.

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ANNOUNCING SCHERING'S NEW MYOGESIC[X]

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CARISOPRODOL

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
February 1960, Vol. I, No. 2

ORIGINAL PAPERS

The Physiological Basis For Peptic Ulcer Surgery

EDWARD R. WOODWARD, M.D.
Gainesville, Florida

Two aspects of this subject are discussed. First is the concept that the pathophysiology of gastric ulcer is completely different from duodenal ulcer. Since the patient with gastric ulcer secretes too little acid, the surgical treatment of choice is simple conservative partial gastrectomy with the Billroth I anastomosis preferred.

The second concept is that patients with duodenal ulcer produce too much acid gastric juice. The objective of surgery is to reduce this secretion to the point where normal defense mechanisms will protect against ulceration. This can be accomplished by either removing a portion of the acid secreting gastric mucosa or by reducing the stimuli to the acid secreting tissue. The latter objective can be achieved by abolishing the nervous phase of gastric secretion through vagotomy, with the possible addition of removal of the gastric or hormonal phase of gastric secretion by resecting the gastric antrum.

THERE ARE FEW SUBJECTS in surgery about which more controversy has existed and in which more new operations have been proposed than that of the surgical treatment of peptic ulcer. Osler referred to duodenal ulcer as "the wound stripe of civilization" and it is generally considered to be one of the so-called psychosomatic disorders. The evidence indicating the importance of the central nervous system in the pathogenesis of peptic ulcer is voluminous and convincing but there is still much that is poorly understood about the mechanisms involved.

Surgery for this disease has been aimed at the local pathology, the peripheral mechanism, the "target organ." Since the basic etiological factors have not been attacked, it is not surprising that the results of surgery have been somewhat less than ideal.

It is not possible to consider all the various aspects of this subject in one essay and the presentation is therefore limited to two main pathophysiological considerations believed important to the surgeon. First is the concept that the disturbed physiology in gastric ulcer is completely different from that in duodenal ulcer and, secondly, is the thought that the over-production of acid gastric juice in duodenal ulcer is related to the pathogenesis of the disease and is an important clue to its surgical control.

Benign gastric ulcer has very striking clinical differences from duodenal ulcer in the sex and age groups involved, the complications encoun-

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tered, and the response to medical therapy. Even more striking is the remarkable difference in the functional state of the stomach. In the patient with duodenal ulcer, there is marked hypermotility of the stomach with rapid almost precipitate emptying and frequent deep waves of peristaltic contractions. In contrast, the patient with gastric ulcer has diminished motility with sparse contractions and prolonged retention in the stomach of either barium or food materials. This is probably related to the much greater frequency of vomiting and weight loss in patients with gastric ulcer as compared with those suffering from non-obstructing duodenal ulcer.

The secretion of acid gastric juice is also depressed in patients with gastric ulcer. Not only is it much less than in patients with duodenal ulcer, but the basal gastric secretory rate is even lower than in normal individuals. Very frequently the gastric ulcer patient will demonstrate no free acid in the aspirate from the fasting stomach, and rather vigorous stimulation with histamine may be required to demonstrate the ability of the stomach to produce HCl.

There two marked pathophysiological differences between gastric and duodenal ulcer added to the known clinical differences between the two lead to the inescapable conclusion that they are two entirely different diseases. Because of its occurrence in an older age group, gastric ulcer may be related to a vascular disturbance. An area of decreased blood supply in the stomach wall might well have a reduced resistance to the corrosive action of acid-pepsin.

Dragstedt has theorized that the gastric retention of the gastric ulcer patient may cause hyperstimulation of the gastric antrum with excessive release of the hormone, gastrin, stimulating acid gastric secretion. In support of this is the well documented fact that simple resection of the antral portion of the stomach is resected *distal* to the gastric ulcer—the Kelling-Madelener operation. Even a huge ulcer left in situ as part of such an operation will promptly heal in the postoperative period and will not recur.

SURGICAL APPROACHES

The surgical treatment of choice in benign gastric ulcer is conservative partial gastrectomy (antrectomy or antrum resection). The extremely low rate of post-operative recurrence of ulceration makes surgery a very efficient treatment for benign gastric ulcer, and justifies its rather free application in this disease. Radical operation is not necessary since an unremoved ulcer will promptly heal. The diagnosis of malignancy is made with such accuracy by using all diagnostic means available to us, and including where necessary direct vision and biopsy, that this possibility does not justify radical surgery.

The "test of healing" is a useful method for selecting patients for surgery (Table I). In 100 consecutive cases of gastric ulcer admitted to the Wadsworth Hospital, Veterans Administration Center, Los Angeles, 40 healed promptly on an intensive medical regime while hospitalized. Fourteen patients healed their gastric ulcer promptly, but had a recurrence in less than two years. All proved to be benign. Forty-six patients did not show complete healing of the crater during the four-week test period, and were subjected immediately to exploration and gastric resection. Forty-one proved to be benign, while five were found to be malignant and had radical gastrectomy.

TABLE I

GASTRIC ULCER—100 CONSECUTIVE CASES

Healed promptly and remained healed		40
Healed promptly but recurred—all benign		14
Failed "test of healing"		46
Benign	41	
Malignant	5	

The very low ulcer recurrence rate following conservative surgery for benign gastric ulcer is most likely related to the very low rate of acid gastric secretion. This factor also makes it entirely safe to use the Schumaker-Billroth I type of end to end gastroduodenostomy. This not only has clear cut surgical advantages, but is also worthwhile from the physiological point of view. Food is routed through the normal passage preserving the digesting and absorbing function of the duodenum, and the digestion of fat, in particular, is definitely superior to the usual gastrojejunal reconstruction. Also, the disagreeable postoperative disturbance known as the dumping syndrome is less common after the Billroth I operation.

The pathophysiology of duodenal ulcer is completely different from that of gastric ulcer and this probably accounts in large measure for the fact that it is much less amenable to surgical therapy. Instead of hypofunction, there is hyperfunction. Whether the hypermotility characteristic of duodenal ulcer is of any surgical consequence or not is unknown. There is good evidence, however, that the hypersecretion of acid gastric juice is of

primary importance in the pathogenesis of duodenal ulcer and also bears directly on the hazards of recurrent peptic ulceration following various surgical procedures.

In the last analysis peptic ulcers are due to peptic digestion of the proteins constituting the gastroduodenal wall. The enzyme pepsin is inactive at a pH higher than 3.5, and is actually destroyed as the pH approaches neutrality. Since pepsin is nearly always present continuously and in abundance, variations in concentrations of hydrochloric acid are much more decisive in the formation of an ulcer. The offensive action of the acid pepsin factor is offset in the normal stomach by (1) neutralization of acid by swallowed food and saliva, secreted mucous, and regurgitated alkaline duodenal fluids; (2) by the protective action of the mucous coat, and less clearly by "tissue resistance" and certain "pepsin inhibitors" (Table II).

TABLE II

HOMEOSTATIC MECHANISMS IN THE STOMACH AND DUODENUM

OFFENSE	DEFENSE
HCl ⇌ Pepsin	Chemical — food; saliva; mucus (3 sources); duodenal content (3 sources); "pepsin inhibitors"
	Mechanical — "mucus barrier"
	"Tissue resistance"

The importance of the latter three factors, if any, in the pathogenesis of peptic ulcer is unknown. However, a relative imbalance between acid secretion and the capacity of the upper gastrointestinal tract for neutralizing it has been found under several different experimental conditions to regularly produce typical chronic peptic ulceration. That hypersecretion of acid is a simple and reliable method for achieving this aim is demonstrated in the classic experiment of Hay et al, in which histamine in beeswax was injected in experimental animals. Similarly, transplantation of the gastric antrum into the colon will result in a marked over-production of the hormone gastrin, which stimulates excessive HCl production in the stomach. Here again chronic peptic ulceration occurs.

When a patient with duodenal ulcer is studied in the fasting state, in the complete absence of any apparent known stimulus, continuous aspiration of the stomach reveals a characteristic excessive secretion of acid gastric juice. This amounts to about four times that seen in normal individuals, and has been found to be present in about 85 per cent of such patients. Psychiatric evaluation has established that this is closely correlated with mental and emotional activity. As further evidence of the nervous origin of this hypersecretion, it is completely abolished by division of the vagus nerves to the stomach.

In duodenal ulcer the stomach itself is histologically normal. A close analogy may be drawn to hyperthyroidism wherein microscopic examination of the thyroid gland does not reveal any abnormality. In both diseases the actual cause is elsewhere, whereas the therapeutic assault must be local. In hyperthyroidism the function of the thyroid gland must be inhibited by drugs or the histologically normal gland largely destroyed through radiation or surgical ablation. It is very interesting to note that just as the thyroid gland is enlarged in hyperthyroidism, the stomach of duodenal ulcer patients is larger than normal, and literally contains more parietal cells. It is unknown whether this represents a hyperplasia; attempts to reproduce it experimentally have been unsuccessful.

From the physiologist's point of view, surgical therapy of duodenal ulcer should be designed in the light of the old dictum, "no acid, no ulcer." Actually, acid need not be completely abolished, but only reduced to a point where the seemingly normal neutralizing mechanisms can handle it adequately. This may be accomplished by two quite different approaches. First, reducing the stimuli to the over-secreting gastric mucosa; or second, by drastically reducing the actual amount of acid secreting tissue.

GASTRIC SECRETION

There are three phases of gastric secretion: nervous, gastric and intestinal. Of these, the first two are by all odds the most powerful and are also susceptible to surgical attack. The nervous phase of gastric secretion is the phase which is markedly exaggerated in patients with duodenal ulcer (Fig. 1). Therefore, from the point of view of the physiologists, division of the vagi can be expected to drastically reduce the secretion of HCl. Surgical experience has borne this out. This procedure was enthusiastically adopted following its introduction by Dragstedt in 1943, but there has since been an equally extensive swing of the pendulum in the opposite direction. It is presently adopted by more and more surgeons with considerably less prejudiced attitudes both pro and

con. Contrary to widely held opinion, physiological study indicates that vagotomy is permanent in about 80 per cent of human subjects upon whom it is performed. Likewise study in large groups of patients has indicated that properly performed ancillary drainage procedures will completely obviate the motility disturbances following vagotomy.

The second, or gastric phase of gastric secretion, is mediated by the hormone gastrin, which is liberated by the antral or non-acid secreting part of the stomach. The antrum constitutes approximately the distal 15 per cent of the stomach, but extends considerably higher on the lesser curvature than on the greater, reaching approximately 40 per cent of the distance from pylorus to cardia. There has been a wave of enthusiasm for resection of the gastric antrum (antrectomy or hemigastrectomy) combined with vagotomy. It is known that the antrum phase may be exaggerated following vagotomy, but study in animals as well as humans indicates that with proper drainage procedures this seldom occurs.

There is no evidence that the antrum is functioning abnormally in patients with duodenal ulcer. The normal stimulus for antral function, i.e., ingested food, reacts the same in duodenal ulcer patients as in normal individuals. A standard test breakfast was given both groups of patients, and the curve of intragastric pH followed for 6 hours. There was no difference between the two groups. There, although antrectomy would reduce secretion in the normal individual to about the same extent as would vagotomy, in duodenal ulcer patients this is a much lesser figure. When the two procedures are combined, therefore, vagotomy is by all odds the most important (Fig. 1). Combining the two procedures of vagotomy and gastric resection may be likened somewhat to the man who wears both suspenders and a belt—either one alone should be sufficient.

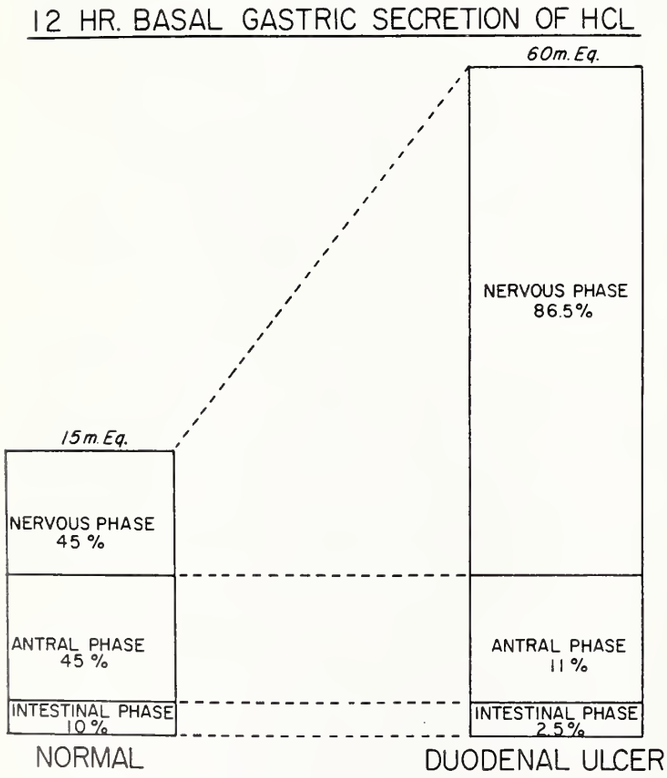

Figure 1. Partition of basal gastric secretion in normal persons as contrasted with duodenal ulcer patients.

EVALUATION OF PROCEDURES

Relatively short term follow-up studies show impressive results through combining the procedures of vagotomy and antrectomy, with an ulcer recurrence rate which is very, very low indeed. If longer follow-up continues to show such favorable results, it is possible the adding of antrectomy may be worthwhile despite having to abandon the surgical technical advantages of vagotomy plus drainage procedure (Fig. 2).

Distal partial gastrectomy has been by all odds the most commonly used operation for duodenal ulcer in the last 25 years. Although the antrum is removed in this procedure, its major physiological blow is struck by rather extensive excision of acid secreting gastric mucosa.* The surgical pros and cons of this procedure will not be dwelt on; certainly it controls peptic ulcer disease in 90-95 per cent of cases. The Billroth I gastroduodenal reconstruction is found to be followed much more frequently by recurrent ulceration than with the more usually performed Hofmeister modification of the Billroth II gastrojejunostomy. Postoperative study in such patients show a much higher incidence of achlorhydria in the latter group, and as time passes after the operation the disparity between the two groups increases. It has been postulated that the perforce reflux of fluid into the gastric stump from the afferent jejunal loop causes a "gastritis" inhibiting gastric acid production. There is some gastroscopic evidence that this in fact occurs.

The major disadvantage of partial gastrectomy as seen by the physiologist is interference with or a loss of gastric function. Diminution in the digestive function of the stomach does not seem to be important. However, loss of the storage function

* Wangensteen advocates preservation of the antrum in his segmental type of gastric resection, wherein acid secreting stomach is resected proximal to the antrum with preservation of gastric continuity.

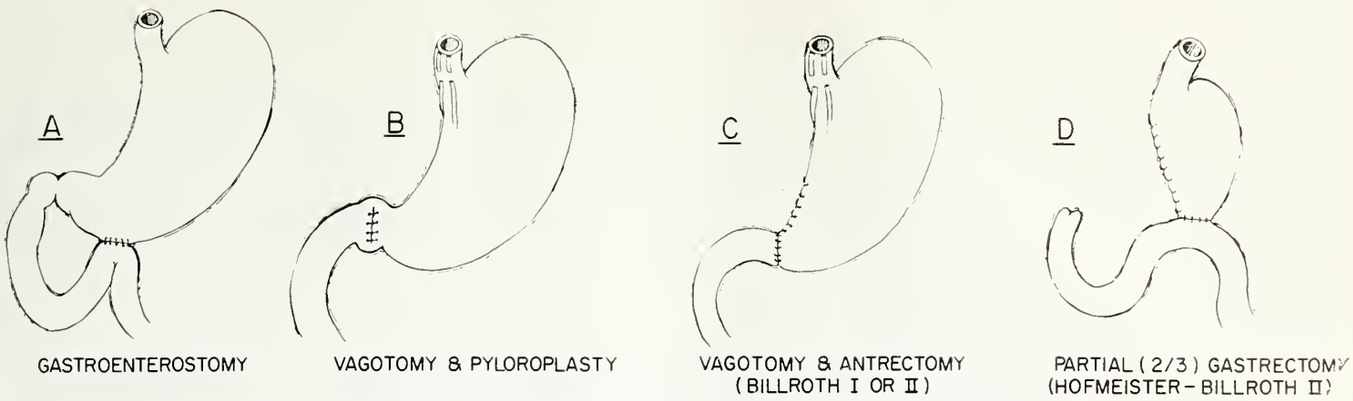

Figure 2. Four surgical procedures useful in treating duodenal ulcer.

of the stomach *is* important in a large number of these patients. For this reason, more extensive removal of the stomach has been abandoned by most surgeons in favor of a relatively conservative 60 per cent to two-thirds removal of the stomach. Using gastric resection for treating duodenal ulcer places the surgeon in an unsatisfactory paradox; the more radical the removal of the stomach the more likely is the peptic ulcer disease to be permanently cured, but also greater is the physiological defect created. Related to the loss of storage function but more specifically the result of loss of the pyloric sphincter mechanism is the post-gastrectomy symptom complex known as the dumping syndrome. The more stomach left the less likely this is to occur and, as pointed out above, it is less frequent with the Billroth I anastomosis. This is probably because of the smaller size of the new gastric exit and the well-documented slower emptying of the gastric stump.

In the patient with scar tissue obstruction from chronic recurring duodenal ulcer disease, the primary life threatening pathophysiological disturbance is obstruction to the outlet of the stomach, i.e., high intestinal obstruction. In this often critical situation simple gastroenterostomy may often be just as life-saving a procedure as simple closure of a perforated duodenal ulcer—a maneuver which most heartily recommend (Fig. 2). There is considerable evidence that more extensive surgery in obstructed patients is fraught with a high incidence of complications relative to resumption of normal gastrointestinal function. This is not surprising since stretch of smooth muscle produces a paralysis or paresis requiring days or weeks for the recovery of normal tone.

SUMMARY

The benign gastric ulcer differs from duodenal ulcer in that there is hypomotility and subnormal secretion of acid gastric juice. Conservative gastric resection (antrectomy) is curative even though the ulcer is not removed. The Billroth I reconstruction is preferred in such cases as being sounder both surgically and physiologically, and the ulcer recurrence rate is inconsequential.

Secondly, control of the hypersecretion of acid gastric juice characteristic of duodenal ulcer patients is singled out as the objective of surgical treatment. This can be accomplished by reducing stimulation through vagotomy and possibly the addition of antrum resection, or by the moderately extensive removal of acid secreting gastric mucosa through partial gastrectomy. Simple gastroenterostomy can be of life-saving value in obstructing duodenal ulcer. ★★★

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Carcinoma of the Colon In Young People

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Carcinoma of the colon occurs infrequently in the young, but often enough to be seriously considered in young persons with abdominal or colorectal symptoms. A case is presented with discussion of clinical findings and definitive surgical intervention. The clinician is admonished to remain alert to this pathology since early diagnosis is essential if the patient is to be benefited.

CARCINOMA OF THE COLON in young people is an unusual condition. A review of reported cases seems to indicate an almost hopeless prognosis. The purpose of this case presentation is to point out the carcinoma of the colon does occur in young people and that it is not as rare as would appear or has been supposed. The prognosis, although poor, is not necessarily hopeless. An analysis of the clinical features of carcinoma of the colon in young people in which resection was performed suggests no features different from those found in older age groups. Pain, however, appeared to be a more predominant symptom. The location of the lesions throughout the colon seems about the same in the younger as in the older patient. The rectum apparently is involved less frequently in the younger age group. Only by being alert to the possibility of the presence of carcinoma of the colon in young people can an early diagnosis be made. This is essential if more such patients are to be benefited.

For unexplained reasons, colloid or mucinous carcinomas of the colon are more common in young people and occur in about 50 per cent of the cases. Carcinoma of the colon may occur at any age. The youngest recorded was a patient who was three years of age. The importance of making a thorough exploration of the abdomen before closing the wound of a young person operated upon for chronic recurring attacks of abdominal pain without apparent cause must be emphasized. With young people, instead of explaining the abdominal pain or enlargement of the mesenteric lymph nodes on the basis of mesenteric adenitis, consideration should always be given to the possibility of the presence of carcinoma of the colon. All of these patients should have the benefit of a proctoscopic examination and a colon x-ray preoperatively.

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OTHER LESIONS

Thus far, only primary carcinoma of the large intestine in young people has been considered. Mention should be made of a second group of lesions, the adenomatous polyp. These are premalignant lesions which should be treated before malignancy has had the chance to develop. Benign polyps of the bowel often bleed before malignancy develops. Whenever bleeding from the rectum occurs in young people, a thorough search should be made for the cause. The removal of a benign polyp may prevent the development of serious malignant disease of the bowel. Furthermore, it has been demonstrated that carcinoma of the large intestine in adult life can be due to changes in polyps which manifested themselves in early life and have subsequently become malignant.

CASE PRESENTATION

A twenty-two-year-old colored male was admitted to the Mississippi Baptist Hospital in Jackson on August 5, 1959, complaining of abdominal cramping and food souring on his stomach.

Approximately three years ago, the patient be-

gan having abdominal cramps occurring at three-month intervals. Approximately six months previously, the cramps occurred daily but would gradually subside. Cramping did not occur in relation to meals or the time of the day. The pains were described as a knife sticking in the mid-epigastrium two to three times daily. Approximately two weeks prior to hospital admission, the pain became more severe and chronic in nature. The patient vomited everything he ate. He vomited no blood, had no diarrhea, passed no blood in his stool, and had no tarry or alcoholic stools. During this period, the pain was sited primarily in the right flank but later moved to the umbilicus and the lower abdomen. There was a definite change in bowel habits. The patient observed that his stools became smaller in caliber. He denied jaundice or cola colored urine. His weight loss was approximately 15 pounds during the six months prior to admission.

His past history disclosed that his general health had been good with no associated diseases, normal childhood diseases, no surgery, no allergy, and no accidents.

PHYSICAL FINDINGS

Blood pressure was 130/90; temperature, 99.2° F.; pulse, 80; and respiration, 20. The patient's general appearance was that of a chronically ill, young colored male who, while lying in bed appeared to be in no acute distress. His skin was normal as to temperature and turgo. With respect to nodes, there was no palpable lymphadenopathy. The pupils were observed as round, regular, and equal, reacting normally to light and accommodation. Ears, nose and ora-pharynx were not remarkable. The neck was supple and the thyroid, not remarkable.

The chest appeared symmetrical with normal excursion. The lungs were clear and resonant to percussion and auscultation, while the heart presented a normal sinus rhythm and there were neither murmurs nor cardiac enlargement. A generalized tenderness to deep palpation was present in the abdomen, somewhat more pronounced in the right upper quadrant and in both flanks. Some moderate tenderness was found in the mid-epigastrium but there were no palpable masses or herniation. The liver, spleen, and kidneys were not palpable. Normal male genitalia were observed and the prostate was normal with no tenderness. Rectal examination disclosed a good sphincter tone and no masses were apparent. The extremities were found to be essentially within normal limits. A neurological examination demonstrated intact cranial nerves. Tendon reflexes were present, equal, and active.

LABORATORY FINDINGS

Laboratory data revealed a hemoglobin of 14.2 grams; sedimentation rate, initial 20, corrected 14; hematocrit 42 volumes per cent; total WBC 7,700; neutrophils 78, with 1 band and 77 segmentors, eosinophils 1, basophils 17, and monocytes 4. The platelets appeared adequate. Stool examination was positive for occult blood but otherwise negative. Direct serum bilirubin .5, glucose 81, total protein 6.43, albumin 3.93, globulin 2.50, AG ratio 1.66:1, urea nitrogen 13.4. Urinalysis was essentially within normal limits.

On August 6, the second hospital day, chest x-ray was reported as normal; cholecystogram revealed a non-functioning gall bladder; upper GI series was reported as essentially negative with the only variation being irritability and extrinsic deformity of the cap by the gall bladder. Following the upper GI series, the patient complained of increasingly severe cramping in the right upper quadrant, epigastrium, and the right lower quadrant. On August 7, a flat film of the abdomen revealed multiple loops of barium distended small bowel. This film showed that the abdomen was filled with distended loops of the small bowel containing fluid and barium. Further, the colon was slightly distended, containing barium around to the hepatic flexure.

A fairly complete obstruction of the transverse arm of the hepatic flexure was apparent and only a minimal amount of barium was discernable throughout the colon and rectum. The findings appeared to be those of an obstruction lesion in the colon at the hepatic flexure. In these studies, it was difficult to determine the cause of obstruction, although the possibility of an inflammatory origin was suggested.

TREATMENT

On the afternoon of August 7, the patient was seen in consultation and on the evening of August 7, a cecostomy was performed. A large amount of barium was removed from the cecum and colon. The patient withstood the procedure well and was returned to his room in good condition. The postoperative course was essentially uneventful and the cecostomy functioned well. A PPD and Frei test were accomplished with negative results.

On August 8, sulfasuxidine therapy, one-half gram tablets 4, four times daily, was initiated. The cecostomy was irrigated with sulfasuxidine solution of 12 sulfasuxidine tablets in 1 liter of saline, divided into three equal parts for irrigating three times daily. A flat film of the abdomen on August 10 revealed a moderate amount of gas in the colon

with a slight amount of barium visible. A proctoscopic examination to the 25 cm. level revealed no additional pathology.

On August 10, daily enemas were begun, using 1 liter of saline with 12 tablets of sulfasuxidine

Tissue removed, showing an annular constricting lesion of the transverse colon producing obstruction.

and the patient was placed on a low residue diet. This regime was continued until August 21 when a right colectomy was performed.

SECOND PROCEDURE

At surgery, an annular constricting lesion approximately 5 cms. distal to the hepatic flexure producing almost complete obstruction of the bowel at that point was demonstrated. There was no evidence of distant metastasis. The liver was normal and there were no peritoneal implants. Upon determining the lesion operable, the lumen of the bowel was ligated with Penrose drains several inches above and below the tumor. A careful dissection of the vascular supply to the tumor was then accomplished. The ileocolic, right colic, and a branch of the midcolic vessels were ligated high near their origin from the superior mesenteric vessels.

The entire right colon was removed *en mass* and many enlarged lymph nodes were removed with the tissue. An ileotransverse colostomy was then performed, using a two-layer end-to-end anastomosis, the inner layer consisting of 4-0 chromic catgut and the outer layer 4-0 black silk. The mesenteric rent was closed. The cecostomy wound was left open externally. The peritoneum, however, was sutured internally with number 0 chromic catgut.

POSTHOSPITALIZATION COURSE

On August 29, the patient was discharged from the hospital and since that time has been followed in the office at regular intervals. He has gained weight of approximately 15 pounds and has been able to eat without discomfort, nausea, or vomiting. His general condition seems to be excellent. Proctoscopic examination and repeat colon x-ray reveal no evidence of recurrent disease.

Such patients, it is stressed, should be followed at regular intervals with colon studies and proctoscopy to determine possible narrowing of the anastomosis site or other evidence of recurrent disease. If a progressive narrowing of the anastomosis site occurs, these patients should be reexplored because in many cases, evidence of recurrent disease at the anastomosis site will be found. The possibility of a second malignancy is more likely in these patients than in the general population.

SUMMARY

Carcinoma of the colon in young people is an unusual condition. Only by being alert to this possibility can an early diagnosis, which is essential, be made. With early diagnosis and adequate treatment, it can be expected that the chance of cure will be increased. ★★★

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DEFECTIVE INFANT BIRTHS

About 250,000 infants are born defective each year in the U. S. or 1 out of 16. Defects of the skeletal structure is number 1.

Iron Deficiency Anemia

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Iron deficiency anemia is considered the commonest cause of anemia seen in general practice. It is discussed as to cause, usually blood loss from the gastrointestinal tract or excessive menstrual activity. Methods of restoring iron to the body and metabolic processes are discussed. The clinical manifestations and methods of diagnosis are well presented. Vitamins and minerals other than iron are condemned in the treatment of the condition.

IRON DEFICIENCY ANEMIA is the commonest cause of anemia seen in general practice, comprising approximately 40 per cent of all cases of anemia.[1, 2] Interest in the disease has been kindled also by the attention given to it in advertising media such as television. This disease is better understood if there is a concomitant understanding of iron metabolism.

The dietary intake of iron is approximately 12-15 mg per day. Absorption of ingested iron is not a matter of simple diffusion across a membrane, but involves a metabolic transportation through the intestinal mucosa. Normally, approximately 10 per cent of iron ingested is absorbed. Following bleeding or increased iron need, absorption may increase considerably. Food iron occurs as polymers of ferric hydroxide and these are broken down by gastric digestion to monomolecular ferric iron. The ferric iron in the course of absorption is reduced under the influence of reducing agents such as ascorbic acid and sulfhydryl groups in food, to ferrous iron which is better absorbed.[3] Hydrochloric acid may also be of value, but the significance of this in iron absorption has been questioned recently by studies using radioistope techniques. Attempts to increase iron absorption in hypochlorhydric patients by the addition of hydrochloric acid to food were without effect in enhancing iron absorption.[4]

IRON ABSORPTION

Iron is absorbed principally in the doudenum. The current theory holds that a mucosal blocking mechanism is present and it is thought that the mucosal cells direct and restrict iron absorption to some extent. When iron is absorbed, it combines with apoferritin, a cellular protein, producing ferritin, which increases in concentration until it presumably exerts its "blocking action." At the other end of the duodenal cell, ferritin is broken down to iron and apoferritin and the iron is absorbed into the blood stream.

Iron is transported in the blood stream in combination with a beta-1 globulin, transferrin. This is approximately one-third saturated with iron and the iron binding capacity of this protein is approximately 300 micrograms per 100 ml. The normal serum iron is between 50 and 180 micrograms per 100 ml. From the transport iron in the blood stream, iron is utilized in hemoglobin synthesis, may be excreted, or may go to various tissues for storage. The storage forms of iron are ferritin, which is sub-microscopic, and hemosiderin which can be seen as granules under the microscope and is believed to be larger aggregates of ferritin. Both of these can be used for hemoglobin synthesis if needed. Normally, the total body iron is between 4 and 5 gms of which hemoglobin iron comprises approximately 3 gms. The total iron stores vary between 1 and 1.5 gms.

IRON EXCRETION

The body is unable to excrete iron except in minute amounts. In the normal male about 1.0 mg per day is lost from the intestinal tract, the urine, and from exfoliated cells. It is obvious then, from our information about food iron and absorption of iron, that the male can maintain a positive

From the Department of Medicine, Emory University School of Medicine.
Read before the Section on Medicine, 91st Annual Session, Mississippi State Medical Association, Biloxi, May 12-14, 1959.

iron balance without great difficulty. The female, on the other hand, loses larger quantities of iron in menstrual blood loss, pregnancy, and even in lactation. It has been estimated that menstrual blood loss per period is approximately 35-70 ml which would approximate 0.5-1.0 mg of iron per day when spread out over a period of a month.[4]

Pregnancy results in the loss of 750 mg which includes approximately 400 mg of iron to the fetus, and the remainder lost in the placenta and blood loss during delivery. It has been estimated that lactation results in the loss of 300 mg of iron per year of lactation. Thus, iron balance in the female is more precarious than in the male, with losses up to 2 mg per day under relatively normal conditions. With repeated pregnancies or severe menorrhagia the iron losses may be greater.

PATHOGENESIS

Iron deficiency anemia is classically hypochromic and microcytic. Hypochromic microcytic anemias are due either to iron deficiency or to a deficient utilization of iron (see Table I). The latter, however, is rare. Iron deficiency mainly results from excessive menstrual blood loss in women or from the gastrointestinal tract of males and females. The major factor in the pathogenesis of iron deficiency anemia is excessive menstrual blood loss which often is not apparent to the patient and sometimes not to the physician. What may appear to be a perfectly normal menstrual period to the patient may in fact be menorrhagia. In this connection it is important to inquire into the history concerning the number of menstrual pads used per day during the period. It is essential to learn how completely the pads are saturated and particularly to inquire whether double pads are often necessary. It is surprising how frequently this bit of information obtained by a good history can clarify the pathogenesis of a seemingly obscure anemia. Some patients will give the additional history that pads are not adequate on a particular day during the period and that a small towel must often be used. Another useful point is to inquire whether upon arising in the morning a gush of blood is often noted. The presence of blood clots in significant quantities is an additional index of excessive menstrual bleeding.

TABLE I

CAUSES OF HYPOCHROMIC MICROCYTIC ANEMIA

A. Iron Deficiency
   1. Blood loss (the major cause)
   2. Dietary (infants and women)
   3. Absorptive defects
   4. Repeated pregnancies
B. Deficient Utilization of Iron (rare cause)
   1. Thalassemia
   2. Hereditary (sex-linked) hypochromic anemia[8]
   3. Pyridoxine-responsive hypochromic anemia[9]
   4. Oral liver extract—responsive hypochromic anemia[10]

Bleeding from the gastrointestinal tract, unless it is overt and obvious, is more difficult to evaluate. A search for occult blood in the stools in undertaken in the patient in whom the cause of the anemia is not apparent from the history and physical examination. For this purpose the guaiac test is recommended as being most useful. About 10 per cent of normal people may show a 1+ or 2+ test while on an ordinary diet. Consequently, more attention is paid to a 3+ or 4+ reaction which definitely indicates blood in the gastrointestinal tract. Rarely a false positive test may be seen in the patient taking large doses of oral ferrous sulfate.

Diet as a cause of iron deficiency is quite rare in this country, but may be a factor in the premature infant, or rarely, in those who are following a food fad. When iron is adequate in the diet and there is no blood loss, an absorptive defect may be responsible for the failure to transport iron from the intestinal lumen to the blood stream. While hypochlorhydria has often been considered to be a factor in poor iron absorption, steatorrhea is more important in this regard. Steatorrhea may be accompanied by the classical symptoms or it may be latent and require careful research to disclose its presence. The estimation of blood carotene as a screening test for steatorrhea has been helpful.[5] Lastly, iron deficiency may be caused by repeated pregnancies producing a significant drain of iron from the mother.

Hypochromic microcytic anemia may be due on rare occasions to deficient utilization of iron. This is noted in thalassemia and also in some very rare disorders listed in the table.

BLOOD LOSS

Since blood loss is the major cause of iron deficiency anemia, the source of blood loss must be searched for assiduously. Menstrual blood loss as a major factor in the pathogenesis of iron deficiency anemia has already been mentioned. Epistaxis may be a factor which is overlooked, particularly in the patient with hereditary hemorrhagic telangiectasia. The patient may neglect to mention nose bleeds since these are a frequent, if not daily, occurrence in these individuals.

The investigation of the gastrointestinal tract is extremely important when excessive menstrual

blood loss is not present, and in the male. In many gastrointestinal tract lesions, a classical history or significant physical findings are readily noted, as for example in the peptic ulcer, cirrhosis of the liver with varices, ulcerative colitis, hemorrhoids, and following gastrointestinal tract surgery. In other conditions the blood loss from the gastrointestinal tract may be occult, particularly in diaphragmatic hernia, carcinoma of the stomach, parasitic infestation, small bowel tumors, and polyps of the colon.

A last and unusual source of blood loss is frequent blood donations. It should be remembered that each 500 ml of blood transfusion results in the loss of 0.25 gms of iron. Thus, frequent blood donations may result in a serious drain of iron particularly if the diet is borderline. The following case is illustrative.

CASE REPORT

A 31-year-old white male was admitted to the hospital with a history of progressive weakness, sore tongue and throat all of which developed over a period of 6 to 12 months. He was treated by his physician with multiple vitamins and anti-histamines without effect, and was admitted to the hospital because of anemia which was found and for which no readily demonstrable cause was apparent.

Physical Examination: Pallor, tachycardia of 104 and a healed scar over the right knee with evidence of previous skin grafting from the left thigh to the left hand.

Laboratory Data: RBC 3.80, hemoglobin 8.6 gm per cent, hematocrit 32, MCV 83, MCH 22, MCC 27, reticulocytes 1.6 per cent, platelets 1,300,000, WBC normal with 10 per cent bands. The bone marrow was hypercellular with particular increase in the erythroid series. No free HCl was found on gastric analysis after caffeine. No occult blood or parasites in the stools.

Hospital Course: Because of the findings of hypochromic anemia the history was retaken and it was learned that the patient had omitted the history of having donated about 12 blood transfusions in the preceding two years. A detailed dietary history disclosed that he did not like red meat or green vegetables and ate very little of these foods. He also had a severe laceration of the knee during childhood and required multiple skin grafts for a burn of the left hand. He was treated with ferrous sulfate 0.3 grams orally three times daily. A reticulocyte response of 6.4 per cent was noted 11 days later. There was considerable symptomatic improvement.

The soreness of his mouth disappeared and in nine weeks his RBC was 6.4, hemoglobin 19 gms per cent, hematocrit 57, reticulocytes 1.2 per cent, platelets 1,500,000. Leukocyte count was 10,800 with 30 per cent bands, 53 per cent segs, 8 per cent lymphocytes, 6 per cent monocytes, and 3 per cent eosinophils. Because of the large number of bands and their appearance, a diagnosis of the Pelger-Huet anomaly was entertained. A study of his family showed that three sisters and the patient's 6 year old son also had this anomaly. The patient altered his dietary habits, continued on iron for several additional months, and has been well ever since.

Summary: A patient with the history suggestive of more than the usual amount of blood loss during his lifetime, and a diet which must have contained a minimal amount of iron donated 12 pints of blood in a period of 2 years. If the average hemoglobin level of these donated bottles of blood was 12 gms per cent, then 6,000 cc of blood would represent 720 grams of hemoglobin, representing 2,400 mg of iron, a major proportion of his total body iron.

CLINICAL SIGNS

The clinical manifestations of iron deficiency anemia are classically those general symptoms of anemia such as weakness, fatigue, pallor, palpitation, and the manifestations of the primary disease which may result in the anemia. In addition, there are a number of special symptoms which should suggest iron deficiency anemia which has been present for a long time. These are dry skin, sore tongue, brittleness of the nails, spooning of the nails (koilonychia), and dysphagia which may result from the Plummer-Vinson syndrome.

The laboratory diagnosis is quite simple and the most important laboratory test is *the examination of the peripheral blood smear by the physician.* With a little experience, red cells can be noted to be hypochromic and microcytic, thus ruling out as a cause, pernicious anemia which is macrocytic, hemolytic anemia which often is spherocytic and bone marrow failure which is normocytic and normochromic. A study of the red cell indices is also helpful but in the hands of less experienced technicians, indices may not be as accurate as the examination of the peripheral blood smear because of the error inherent in the laboratory examinations and in the arithmetic involved. Recently, Beutler[6] has reemphasized the value of blood cell indices and pointed out that *early* in iron deficiency anemia, the erythrocytes may be normocytic and normochromic rather than hypochromic and microcytic.

A bone marrow examination is seldom necessary, but is hyperplastic and normoblastic. In special cases, a Prussian Blue stain on the marrow will show the iron stores to be depleted or absent.

When done on aspiration smears this procedure has only rarely been of value to us and the staining is technically difficult. It may be that sections of marrow particles would be more helpful as suggested by Beutler. The gastric analysis may show achlorhydria, thus adding to the confusion with pernicious anemia. A determination of serum iron is seldom necessary but in atypical cases it may be advisable to demonstrate the reduction of serum iron to under 50 micrograms per ml (the normal serum iron varies between 50 and 180 micrograms per ml).

DEFINITIVE TREATMENT

Once the cause has been ascertained, treatment of iron deficiency anemia is very simple. The most important factor in the management of the patient, however, is to find the cause. Once this has been done, treatment with oral iron, either ferrous sulfate tablets or ferrous gluconate capsules 0.2-0.3 grams three or four times daily is usually sufficient. Although there are theoretical reasons for administering iron in a fasting state, it is better tolerated if given with or immediately after meals. On this treatment a reticulocyte response to iron begins on the third or fourth day, reaching a peak between the sixth and the 11th day.

The rise in hemoglobin is a function of its initial level and may often begin during the first week of iron administration, but occasionally may be delayed for about a week. It has been shown that the average rise in hemoglobin varies between 0.17 grams to 0.25 grams of hemoglobin per 100 ml per day. If this is not obtained, or if a reticulocyte response does not occur at the anticipated time one should look for one of the following explanations: 1) infection, 2) uremia, 3) hypothyroidism, 4) nutritional deficiency, 5) continued blood loss, 6) malignancy, 7) an error in diagnosis.

Only rarely is parenteral iron administration necessary. Intravenous iron has been supplanted by intramuscular iron in the form of an iron dextran complex (Imferon). This is available in 2 ml and 5 ml ampoules containing 50 mg of iron per ml. Parenteral iron must not be used indiscriminately. The dose must be estimated from the following formula suggested by Brown and Moore:[7]

Normal hemoglobin — Patient's Initial Hemoglobin $\times$ 0.255 = Iron requirement in grams.

The factor 0.255 takes into consideration the blood volume, the conversion of grams of hemoglobin to grams of iron, and a little excess iron to give the patient some iron stores. One should never use over 2.5 grams of iron in a single course.

The addition of many other elements and vitamins to iron is unnecessary and should be deplored. It results in needless expense to the patient without adding significantly to the ease or the results of treatment. The addition of hydrochloric acid is also unnecessary. The use of Vitamin B_{12} and other injectable preparations including vitamins is likewise of no value. In fact, treatment of iron deficiency anemia, once the cause has been ascertained and corrected, is one of the simplest things in medicine and requires only some form of well absorbed oral iron preparation.

SUMMARY

Iron deficiency anemia is a common cause of anemia and is seen by physicians in all types of practice. It is usually caused by blood loss from either the gastrointestinal tract or excessive menstrual blood loss. The diagnosis is simple and can be made from a well taken history and physical examination and verified by the simple expedient of examining a peripheral blood smear. Once the cause has been ascertained and remedied, treatment with iron is effective and inexpensive. ★★★

69 Butler Street, S.E.

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Clinicopathological Conference I

Conducted by the Department of Pathology
Mississippi Baptist Hospital
Jackson, Mississippi

This clinicopathological conference, the first of a series, considers an interesting case of a 17 year old male having a chronic productive cough of ten years duration. Diagnostic and surgical findings are discussed and the final diagnosis explained. Participants in the conference are Drs. H. K. Stauss, Department of Surgery (Thoracic); Kenneth M. Heard, Department of Pathology; Elmer J. Harris, Department of Radiology; and Kenneth O. Williams, hospital intern, all of the Mississippi Baptist Hospital, Jackson.

THIS 17 YEAR OLD white male was admitted to the Mississippi Baptist Hospital on September 1, 1959. He had pertussis at the age of six or seven years and had had a chronic productive cough since that time. Two years previously a bronchoscopy and bronchograms were done which revealed bronchiectasis of the left lower lobe. He had been on postural drainage for three or four years. The cough was more productive in the afternoon. It was stated to be productive of about one-half cup of sputum daily.

CASE HISTORY

There was some hemoptysis at the age of seven years. Two years prior to this admission the patient coughed up blood off and on for three days. He remained in the hospital nearly two weeks at this time. He required no transfusions. He had a mild hemorrhage in January, 1959. There was some associated dyspnea.

System review was otherwise negative. He had had a tonsillectomy and adenoidectomy at the age of six years without complications.

The general physical examination was essentially negative with a blood pressure of 112/70. The patient apeared well-developed and well-nourished. The eyes, ears, nose, mouth, pharynx and neck were all negative. The heart was not enlarged; the rate and rhythm were normal. Cardiac sounds were normal. The lungs were resonant and no rales were heard. There was no abdominal tenderness or rigidity. The liver and spleen were not palpable. The extremities and neurological examination were negative.

LABORATORY FINDINGS

Admission laboratory work at this time showed a hemoglobin of 14.2 grams, the corrected sedimentation rate was 18 mm, and the hematocrit was 42 vol. per cent. The total white count was 9,500 with 67 per cent neutrophils, 28 per cent lymphocytes, and 5 per cent monocytes. The platelets appeared adequate. Urinalysis was negative. A VDRL was negative. Cultures of bronchial washings taken during this admission yielded alpha hemolytic streptococcus and staphylococcus epidermidis.

X-ray examination of the paranasal sinuses showed normal development with no evidence of chronic sinusitis. On examination of the chest a situs inversus was demonstrated. There were noted peribronchial strands in the right base. The remaining lung was clear. On bronchograms the dextrocardia was quite apparent. Fluoroscopically, the heart was shifted very slightly to the right. A moderate degree of cylindrical bronchiectasis was demonstrated involving the basilar segments of the right lower lobe. The superior segment of the right lower lobe showed no evidence of bronchiectasis. There was bronchiectasis involving the segmental bronchi of the lingular portion of the right upper lobe. Apico-posterior and anterior segmental bronchi were normal in appearance. On the left, the upper lobe was not filled completely, but there did not appear to be any abnormalities present in this region. There was a well-formed middle lobe

noted on the left side. No abnormality could be seen in the segmental bronchi of the left middle lobe and the left lower lobe segmental bronchi were normal in appearance.

Bronchoscopical examination revealed the carina sharp and mobile. The right upper lobe orifice was not in the usual position and the bronchial pattern on the right was that of usual distribution seen on the left. There was a moderate amount of secretion on the right. There was no endobronchial tumor noted on either side.

The patient was discharged on October 3, 1959, but readmitted on October 12, 1959, for surgery. On October 13 an operation was performed.

DISCUSSION

Dr. Stauss: "In this protocol, we are concerned with a teen-ager who has had chronic productive cough of ten years duration and intermittent hemoptysis. There are two key points in the past medical history that help make the diagnosis in this case. In the first place, we have a classic history of bronchiectasis, e. g., a youngster who had pertussis at the age of six or seven and who subsequently had a persistent chronic cough and bronchorrhea with intermittent exacerbations, hemoptysis off and on, frequent flare-ups of respiratory infection, with sputum amounting to about one-half cup a day.

"Secondly, we have radiographic documentation of dextrocardia. This clinical picture fits what has been described as Kartagener's triad or syndrome, with the exception that this lad, by x-ray at least, does not have any overt evidence of paranasal sinusitis. Nevertheless, even without x-ray evidence of sinusitis, this patient could still have paranasal sinus disease in the form of maldevelopment or hypoplasia of one or more of the paranasal sinuses or polyposis of the nasopharynx. During the course of his evaluation for suspected bronchiectasis, he underwent bronchoscopy and bronchographic examination.

At endoscopy, the only unusual feature noted was a mirror image of the right and left bronchial tree as compared to normal. In other words, upon the inspection of his right side, the usual take-off of the right upper lobe bronchus was not seen and his right endobronchial anatomy has the distribution of orifices usually seen in a left bronchial tree. Likewise, bronchographic study showed a well-developed middle lobe on the left rather than on the right, and there were three lobes on the left and only two on the right. The bronchograms, also, confirm that he had cylindical bronchiectasis involving the basal segments of the lower lobe and also of the lingular bronchi of the upper lobe on the right.

"The only other pertinent discovery was that sputum examination yielded a growth of alpha hemolytic streptococci and staphylococcus epidermidis, which is a frequent finding in many inflamed nasopharyngeal pasages, but probably is much more common and more significant for individuals who have bronchiectasis. Of course, we do not know whether a selected bronchial washing might have yielded the same or possibly other organisms. There are only two points which are missing from the history to make this a really classical case of Kartagener's syndrome; one is a lack of documentation for sinusitis, and the other is the possibility of a familial tendency for similar abnormalities in other members of his family.

"As you may or may not know, dextrocardia is an inherited trait, usually with a dominant rather than a recessive genetic feature; and several cases have been reported of Kartagener's triad in twins, and in siblings and other close relatives—and, in one instance, twins and two other siblings of one family all had this syndome. At the present time, there probably are some one hundred and fifty cases of this disease reported in the English literature. Apparently, the first recorded clinical correlation of this kind in the literature was in 1904 by Siebert, who described merely the coincidence of dextrocardia and bronchiectasis. Then, in 1923,

Figure 1. Bronchogram showing situs inversus and bronchiectasis.

Kartagener first described the triad of situs inversus, bronchiectasis, and sinusitis. The first American or English publication on the subject is by Adams and Churchill of Boston, in 1937, at which time they reported a total of 23 cumulative cases.

BRONCHIECTASIS: ACQUIRED OR CONGENITAL?

"There are some other interesting aspects of this subject. The matter of whether bronchiectasis is always acquired or, perhaps, occasionally congenital in nature, has been discussed by many. Generally speaking, bronchiectasis is an acquired disease having to do with bronchial infection plus bronchial obstruction—which comes first is often difficult to say. A noteworthy feature is that, whereas, the occurrence of bronchiectasis in reports of studies in large general hospitals will vary somewhere around ½ per cent and not exceed 1 per cent for institutions which have more of an interest in thoracic disease; the incidence of bronchiectasis in persons with dextrocardia is 16 to 23 per cent in most series—therefore, represents a 33 per cent increase of bronchiectasis in individuals with this congenital anomaly as opposed to patients without this developmental abnormality.

"It is interesting to note that dextrocardia by itself is a congenital anomaly varying from one per 3,000 to one per 12,000 cases in various reported autopsy and clinical series. There has been considerable speculation as to why, on a genetic basis, bronchiectasis should occur so much more frequently in patients having dextrocardia. The idea has been proposed that the mere transposition of the thoracic viscera has some compromising effects upon the bronchial tree, but this has been seriously questioned by many.

"Interestingly enough, a recent article reported a newborn child who, during the first three days of life, developed a very severe purulent nasal discharge, was found to have dextrocardia and hypoplasia of the paranasal accessory sinuses, and obviously had a sinusitis. Her alert physicians immediately became suspicious of Kartagener's syndrome; however, no bronchiectasis was demonstrated. It was speculated as to whether or not the full syndrome might ultimately develop as a result of the infection in this particular child; for, as we know, there is a sympathetic relationship between infection in the upper and lower respiratory passages and most patients with bronchiectasis, even though they do not manifest Kartagener's triad, will have a history, at least, of coincident paranasal sinus disease, tonsilitis, etc.

"One additional interesting feature is the similarity between bronchiectasis associated with dextrocardia and bronchiectasis seen in Marfans' syndrome, which represents another set of congenital anomalies. Apparently, such individuals also present a much higher incidence of bronchiectasis than otherwise normal subjects. It is, perhaps, also worthy of mention that, in people who have dextrocardia one frequently finds other congenital anomalies, usually not of the thoracic or cardiovascular variety, but frequently related to the lower alimentary or urinary tracts.

"I believe that the patient we are considering, despite the lack of radiographic evidence of paranasal sinus disease, fits the criteria for Kartagener's triad or syndrome, and is a very interesting case in point. In the recent literature, including a leading editorial in the *J.A.M.A.* in 1955, there are contained some recommendations along a preventive medicine background, advising that any patient who is found to have situs inversus, even though he or she may be essentially asymptomatic, should be carefully interrogated, if not rather seriously studied, from the standpoint of whether or not Kartagener's syndrome exists, because of the very high incidence of bronchiectasis in people with dextrocardia. And also that even if such individuals do not have bronchiectasis of an overt nature, but do have paranasal sinus disease or polyposis, that such patients be most vigorously treated in an effort to avoid the development of frank bronchiectasis."

FAMILY STUDIES

Dr. Heard: "In regard to the broader scope of preventive medicine, some even make the recommendation that the siblings of anyone with dextrocardia should be studied, possibly leading to a complete family work-up. I think we ought to get back to Dr. Harris and have him show us the x-ray films."

Dr. Harris: "The patient was first seen in the X-ray Department on September 1, and a film of the chest was made which showed the apparent dextrocardia. The following day films of the sinuses were made which showed all sinuses to be well-developed and clear with no evidence of acute or chronic sinusitis being seen. On the following day a bronchogram was made and evidence of marked fibrosis or bronchiectasis of the basilar segments of the right lower lobe was demonstrated, with the superior segment being clear.

"It was of interest that there was a well-developed lingular lobe actually in the right lung going off the upper lobe bronchus, while on the left there was a well-developed middle lobe, this being an exact mirror image of what we ordinarily see. The apical segments and also the basal seg-

ments, following the same pattern, showed a mirror image bronchial distribution."

Dr. Heard: "It might be pointed out that the stomach bubble is on the right side, there, too."

Dr. Harris: "Yes, I think on some of the films enough of the abdomen is included to show that the liver is on the left side."

Dr. Heard: "The operation performed was a right lower lobectomy and segmental resection of the lingular segment, and typical bronchiectasis was confirmed with dilatation of the bronchi, thickening of the walls, marked chronic inflammatory reaction and fragmentation of the cartilage. I have very little to add to Dr. Stauss' discussion regarding pathogenesis, etc., except to say that I did run across one report from Stanford University in which five cases in children were reported, with one reported in some detail who died at age 14 months with acute respiratory infection.

"At autopsy, atelectasis of a portion of the lung, I forget which portion it was, was the predominant finding, and they noted that the main bronchus leading to this region was collapsed. Microscopic sections of this bronchus revealed absence of cartilage, so that may give us another clue as to the defect present. If there is a defect in development of cartilage, it would go along with what Dr. Stauss said, being similar to Marfans' syndrome and other mesenchymal defects. Actually, in this case we have not sectioned the main bronchus to the lower lobe, but after reading that article I think we shall go back and do so. In the involved bronchi we did study, there was fragmentation of cartilage which one sees in bronchiectasis ordinarily. Are there any questions or is there any discussion?"

Dr. Williams: "Was this a complete situs inversus?"

Dr. Harris: "Yes."

Dr. Heard: "We have the mirror image of the bronchial tree and lungs, and the evidence of the stomach being on the right, and, as Dr. Harris said, one film showing the liver on the left."

Dr. Williams: "They do not have to be a complete situs inversus, do they?"

Dr. Heard: "No, I believe that even just dextrocardia fits into the syndrome as well."

Dr. Stauss: "Actually, that is what the described syndrome consists of—dextrocardia, sinusitis, and bronchiectasis; but many of these patients have complete transposition of viscera."

Dr. Heard: "Are there any further comments? To those who came in late, we presented a case of situs inversus with bronchiectasis, which fits into the so-called Kartagener's syndrome."

Dr. Stauss' diagnosis was announced as being Kartagener's syndrome, situs inversus and bronchiectasis. The pathological diagnosis was Kartagener's syndrome. ★★★

1190 North State Street

HOUSE RULES FOR CORONARY CLUB

Queen Elizabeth's physician, Sir Daniel Davies, told the British Chest and Heart Association at London that 6 simple rules can qualify an individual for almost certain membership in the "coronary club." These are:

—Work every evening, Saturdays, Sundays, and holidays. Be careful to permit no personal considerations to interfere.

—Take office work home if it can't be finished during the day.

—Never refuse committee appointments, invitations to meetings, parties, and the like, no matter how tired you may be.

—Don't permit meals to interfere with work. Either skip lunch altogether or eat a snack while taking telephone calls and dictating.

—Delegate neither authority nor responsibility. Carry the whole load and let nobody else deprive you of the praise or blame.

—When business takes you away from home, travel at night which will assure missing no time from work.

—United Press International

Maternal Mortality In Mississippi During 1957

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Studies reported by the Committee on Maternal and Child Care disclose many factors which have contributed to a reduction in maternal mortality. From among all obstetrical deaths occurring in Mississippi during 1957 for which data are available, hemorrhage and toxemia of pregnancy were the greatest individual causes.

THERE HAS BEEN a sharp reduction in maternal mortality in the United States during the last thirty years. In 1930, 67.3 women died per 10,000 live births (white women—60.9 per 10,000 live births and non-white women—117.4 per 10,000 live births). In 1955, the maternal death rate was 4.7 per 10,000 live births (white—3.3, non-white—13.0 per 10,000 live births).

Many factors have contributed to this remarkable change. Among these can be cited improved antepartal care, better hospital facilities, increased use of blood, and the development of antibiotics. Increasing awareness by physicians of the causes of maternal deaths has also played a part. One of the ways in which knowledge of these problems has been disseminated has been by the work of maternal mortality committees in various states and cities.

STUDY BACKGROUND

During the Centennial Annual Meeting held in Jackson, Mississippi, in 1956, the House of Delegates of the Mississippi State Medical Association authorized a continuing maternal mortality study by the Committee on Maternal and Child Care. During the remainder of 1956 and 1957, much preliminary work was done by the committee and the executive office of the association in organizing a study to carry out the mandate of the House of Delegates. Early in 1958, the first cases became available for study and the present report deals with the information obtained during the first full calendar year of study—January 1 through December 31, 1957.

Chairman, Committee on Maternal and Child Care of the Council on Medical Service, Mississippi State Medical Association.

Read before the Section on Obstetrics and Gynecology, 91st Annual Session, Mississippi State Medical Association, Biloxi, May 12-14, 1959.

In setting up a procedure, the committee was primarily concerned with collection of information. Various methods of doing this have been reported. In some states and communities information is obtained by questionnaire only. In other areas, special investigators are sent out to the hospitals where maternal deaths have occurred to collect detailed information. For various reasons the committee rejected the second alternative and concentrated upon devising a data sheet and a procedure which were simple and yet would bring in as much information as possible.

Review of data sheets sent out by committees in other states indicated considerable variation. Many consisted of several pages of information, while others were confined to a single sheet. The committee felt that the use of a single data sheet, on which as much information as possible was included, would be more likely to bring a response than if a large sheaf of documents was sent to the responding physician. Therefore, a special data sheet was constructed which fitted onto one legal sized page.

DATA COLLECTION

The present procedure is as follows: A letter requesting information is sent by the chairman of the committee to the physician who attended any

woman dying during or within 90 days after pregnancy. With this letter is enclosed a data sheet. If no reply is received, a second letter, signed by the Executive Secretary of the association, is sent one month later. If this also brings no response, a third letter is sent by the chairman of the committee.

Following the receipt of data sheets, together with any other information available, each case is assigned to a member of the committee for review. Before this is done, all identification is removed from the record, so that it is completely anonymous. The committee member who has received the case for review summarizes it and presents it at the next meeting of the committee. Meetings of the committee are held every three months at the central office of the association.

At the quarterly meeting, the case is evaluated by the committee as a whole according to the standards suggested by the Committee on Maternal and Child Care of the Council on Medical Service of the A.M.A. in their "A Guide for Maternal Death Studies." This evaluation involves:

I. Determination of a specific diagnosis.
II. Determination of the cause of death—Direct Obstetric, Indirect Obstetric or Non-related.
III. Determination of avoidability. Avoidability is judged in an ideal academic sense. This concept involves three assumptions. First, the physician possessed all the knowledge currently available regarding the factors involved in the death. Secondly, by experience, he had reached a high level of technical ability. Thirdly, he had available to him all the facilities present in a well-organized and properly equipped hospital.
IV. Determination of avoidable factors. This involves a decision as to whether professional, hospital, patient, combined or undetermined factors are concerned with the particular maternal death under study.

In addition to the above, replies are evaluated with regard to their adequacy in permitting the committee to come to definite conclusions. A constant check is kept upon the data sheets to see if they are producing the necessary information. In this connection, it should be pointed out that the same data sheet was used for all the cases reported here. Certain deficiencies in this data sheet have been noted and arrangements are currently in hand to make the necessary revisions.

STUDY RESPONSE

An outstanding response was received from the physicians of our state to the committee's inquiries regarding maternal deaths in 1957 (Table I). Sixty-four replies (85 per cent) were received out of 75 requests for information. Sixty (80 per cent) of these replies contained sufficient information for analysis by the committee. It is interesting to note that of the total of 64 replies, 42 were received in response to the first letter, 15 to the second letter and seven to the third letter.

TABLE I

Total cases reported	75	
Replies received	64	(85%)
Replies usable	60	(80%)

The adequacy of the data received was rated from 5 to 0 in the following manner:

5. Data sheet complete or virtually complete; adequate explanatory note; adequate autopsy report.
4. Two of the above criteria present.
3. Data sheet moderately complete *and* relevant explanatory note.
2. Data sheet partially complete and brief explanatory note *or* data sheet moderately complete with no explanatory note.
1. Data sheet sketchily completed with no explanatory note *or* brief explanatory note only.
0. No reply available.

Although the over-all response to the committee's inquiries was very good, it can be seen from Table II that many of the replies contained only the bare minimum of information. Twelve (Categories 4 and 5) contained detailed information. However, sufficient data were usually obtainable from replies of Categories 1, 2 and 3 for the committee to reach general conclusions. In many instances further details would have been of help.

TABLE II

ADEQUACY OF DATA

Category 5	1	(1.7%)
Category 4	11	(18.3%)
Category 3	15	(25.0%)
Category 2	14	(23.3%)
Category 1	19	(31.7%)

STUDY FINDINGS

The breakdown of the 60 maternal deaths into direct obstetric causes and indirect obstetric causes is shown in Table III. In 49 cases direct obstetric causes were considered to be present and in 11 indirect obstetric causes. No deaths were due to non-related causes. It is likely that

ABOUT THE COMMITTEE

In addition to the chairman, Dr. Newton, the Committee on Maternal and Child Care consists of Drs. Frank C. Massengill, Brookhaven; W. H. Noblin, Jackson; Joe N. Robinson, Columbus; H. C. Ricks, Jr., Jackson; Margaret P. Veller, Natchez; William B. Wiener, Jackson; Blair E. Batson, Jackson (Consultant); Curtis W. Caine, Jackson (Consultant); and J. Manning Hudson, Jackson (Consultant).

Formal meetings of the committee are conducted quarterly but continuous investigation and research are among those activities undertaken at staff level under the supervision of the chairman. The committee urges physicians in attendance when obstetrical death occurs to respond to inquiries as a contribution to these studies which seek improvement of obstetrical care.

TABLE III

CAUSES OF DEATH

Direct obstetric	49	(81.7%)
Indirect obstetric	11	(18.3%)

there were some deaths due to non-related causes such as, for example, automobile accidents, but information on the occurrence of such deaths is difficult to obtain.

Table IV shows a further analysis of the direct obstetric causes of death. Hemorrhage was by far the most common, accounting for 48.3 per cent of the total deaths. The commonest causes of hemorrhage were uterine atony and abruptio placentae, accounting for eight and five cases respectively. Other causes were coagulation defect (3), retained placenta (2), abortion (2), placenta previa (2), ruptured uterus (2), ectopic pregnancy (1), cervical laceration (1), inversion of the uterus (1) and undetermined (2).

TABLE IV

CAUSES OF DIRECT OBSTETRIC DEATHS

		Total Deaths	*Per Cent of Total Deaths*
Hemorrhage		29	48.3
Hemorrhage alone	26		
Hemorrhage with toxemia	1		
Hemorrhage with anesthesia	1		
Hemorrhage with (?)	1		
Toxemia		10	16.7
Toxemia alone	9		
Toxemia with vascular accident	1		
Infection		6	10.0
Infection alone	5		
Infection with (?)	1		
Anesthesia		1	1.7
Undetermined		3	5.0

Of the eleven deaths due to indirect obstetric causes, seven were due to vascular disease, three to cardiac disease and one to a combination of urinary tract and vascular disease.

FACTORS OF AVOIDABILITY IN MATERNAL DEATHS

Table V shows that a high proportion (90 per cent) of the maternal deaths were considered by the committee to be avoidable. However, it should be clearly understood that avoidability is judged in an ideal academic sense, as mentioned above, and that in the majority of instances the circumstances surrounding the death were far from ideal.

Possible avoidable factors were considered by the committee in relation to all the avoidable deaths. The importance of such evaluation lies not in the individual case, but in pointing up general areas in which improvements in maternal care can be made. In 41 cases a single avoidable factor appeared to be predominant and in 13 several avoidable factors were present. Breakdown of the

TABLE V

AVOIDABILITY

Avoidable	54	(90%)
Non-avoidable	5	(8.3%)
Undetermined	1	(1.7%)

avoidable factors indicated that they were considered to be professional in 29 cases, patient factors in 20, hospital factors in 11 and undetermined factors in eight cases.

The response of Mississippi physicians to the committee's requests is a heartening sign of the willingness of the medical profession in our state to contribute to the general sum of medical knowledge. In regard to the over-all evaluation of the data two points are of particular interest. In many cases considerable additional information of value might have been available if an autopsy had been performed: this was done in only four cases. In the second place, one of the most valuable parts of the data sheet has been the physician's own account of the events surrounding the death. The importance of adequate records in this respect cannot be over-emphasized.

CAUSES OF OBSTETRIC DEATHS

Comparison of the causes of death in Mississippi with those reported in other studies is of interest. In a summary of 691 maternal deaths reported from seven different areas between 1950 and 1955 Dalziel found that hemorrhage was responsible for 185 cases or 26 per cent of the total. In Mississippi hemorrhage was responsible totally or in part for 48.3 per cent of the maternal deaths. Toxemia was responsible for 21 per cent of the deaths in the collected series and in Mississippi for 16.7 per cent.

The importance of hemorrhage as the chief cause of maternal deaths has been emphasized by others and a recent study by Klein and Clahr from Bronx County, New York shows it to have been responsible for 19 per cent of maternal deaths over a 12 year period. In this one year study insufficient numbers of cases are available from Mississippi for adequate comparison in regard to other causes of death.

Since hemorrhage was responsible for nearly 50 per cent of the deaths, it is worthwhile to consider some of the factors which appeared to the committee to have contributed to such deaths. More than one factor may have been operative in any given case. In 14 of the 29 cases lack of sufficient blood to treat massive hemorrhage adequately was evident. Lack of fibrinogen also appeared to have been a factor in two of the three cases where a coagulation defect was presumed to have existed, although laboratory proof was lacking. In the third case of coagulation defect it seemed that this followed irreversible shock due to hemorrhage and fibrinogen probably would have been of little value. In 14 cases death from hemorrhage appeared to be related to lack of antepartal care and home delivery by a midwife. In these cases delay in obtaining medical aid was significant.

In brief, the findings of the committee in regard to death from hemorrhage underscore four major obstetrical principles. First, adequate antepartal care is essential. While failure to seek antepartal care may be ascribed in part at least to the patient, physicians still have a responsibility for encouraging women to attend regularly during pregnancy. Secondly, delivery at home in a remote place, where competent medical help is not quickly available and without medical supervision, is hazardous. Thirdly, when major complications occur during pregnancy, labor or in the puerperium consultation with another physician is essential. Lastly, and most important, is the urgent need for the provision of adequate blood for replacing loss from hemorrhage. Every hospital in which deliveries are performed should have easily available within a few minutes notice sufficient blood to treat properly any obstetrical emergency at any time of the day or night.

SUMMARY

1. Data sheets and requests for information were sent to physicians attending 75 women who died during or within 90 days after pregnancy during 1957 in Mississippi.

2. The response to this study has been excellent. Sixty (80 per cent) usable replies were received and reviewed by the Committee on Maternal and Child Care of the Mississippi State Medical Association.

3. The results of this review are presented in terms of adequacy of replies, causes of death, avoidability and avoidable factors, according to the A.M.A. Guide for Maternal Death Studies.

4. Hemorrhage accounted for 29 (48.3 per cent) of the maternal deaths studied. The various causes of hemorrhage found and the factors leading to death from hemorrhage are discussed. The importance of adequate records, proper antepartal care, hospital delivery, consultation for major complications and provision of adequate amounts of blood for replacement are emphasized. ★★★

2500 North State Street

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Case Report II of The M.S.M.A. Maternal Mortality Study

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M.S.M.A.'s Committee on Maternal and Child Care discusses another case where an obstetrical death apparently occurred from placentae praevia.

Bleeding was experienced in the third trimester of pregnancy and its seriousness as a complication is explored. Other clinical aspects of the case are examined and factors of avoidability are assigned.

ALL MATERNAL DEATHS occurring in Mississippi are regularly reviewed by the Committee on Maternal and Child Care. This case report concerns hemorrhage, one of the most common causes of maternal deaths, and bleeding in the third trimester.

CASE 13810-59

Mrs. X, a 32-year-old white female, gravida 8, aborta 2, para 5, was first seen about one week prior to the expected date of confinement. Previously, she had received some antepartum care at a county health department prenatal clinic. When she was first seen and admitted to the hospital, her principal complaints were nausea, vomiting, and pedal edema; she had been told her blood pressure was elevated. When questioned, she recalled that she had experienced some vaginal bleeding during the preceding week.

On admission to the hospital, bed rest, Compazine for hypertension and nausea, and Diuril for the generalized edema were prescribed; blood pressure on admission was 170/130. Neither laboratory work nor examination were performed. About one week after hospitalization, she walked in the wards for a few hours and then began to have profuse vaginal bleeding. She was immediately returned to bed rest and the family informed that blood transfusions were required and donors would be necessary. At this time, a hemoglobin was performed and determined to be 6.0 grams. After two days of continued vaginal bleeding, blood donors were again sought through the family but none were obtained.

Bleeding continued and the physician ascertained it was necessary to empty the uterus immediately. A Caesarean section was performed. Ether anesthesia was administered by a nurse-anesthetist and the procedure required more than an hour.

At surgery, the placenta completely covered the internal os. An apparently normal living baby weighing 7½ pounds was delivered and survived. Recovery appeared uneventful but on the third postoperative day, the patient complained of dyspnea. At that time, blood pressure was 110/60 and hemoglobin was 4.0 grams. Since the blood pressure was initially 170/130, it was believed that the patient was in shock and, in the absence of blood, a Levophed infusion was begun. Two days later the patient expired.

CASE REVIEW

In case review, the following evaluations were made:

I. *Adequacy of Data.* The data obtained in this case were rated as 3 in adequacy on a scale of 1 (minimal) to 5 (completed data sheet, relevant explanatory note, and autopsy report).

II. *Cause of Death.* This case was believed to be a direct obstetrical death due to hemorrhage from placenta praevia but the exact cause of death was not definitely determined.

III. *Avoidability.* In ascertaining avoidability, the American Medical Association Guides for Maternal Death Studies assumes that (1) the phy-

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Obstetrician-gynecologist member, Committee on Maternal and Child Care.

sician possesses all knowledge currently available relevant to the factors involved in the death, (2) he has a high level of technical ability by experience, and (3) he has available to him all facilities present in a well organized, properly equipped hospital.

It is realized that these are extremely strict criteria and that a majority of maternal deaths occur under far less ideal circumstances. However, if maternal care is to improve, a high standard must be maintained. On this basis, the committee felt that this death was avoidable.

IV. *Factors of Avoidability.* If the death is considered avoidable, an attempt to assign factors of avoidability to the physician, hospital, patient, or a combination of these is made. It was believed that a combination of poor hospital facilities, degree of professional judgment, and possibly abandonment of the patient by the family should be considered as factors contributing to death.

DISCUSSION

From available information, the committee was unable to determine the exact cause of death. It seemed reasonable, however, to presume that death occurred as a result of the patient's profound anemia, complicated by the operation. Four points in connection with this case appear evident.

The first concerns the management of bleeding in the third trimester of pregnancy. When bleeding occurs at or near term, it is a serious complication and demands prompt investigation and management. Among the more common causes of bleeding during the third trimester are placenta praevia, abruptio placentae, ruptured marginal sinus, and cervicitis. It is, therefore, most important to diagnose the cause of bleeding. In placenta praevia, a vaginal or rectal examination may cause profuse vaginal hemorrhage. Therefore, on admission the patient should be typed and cross-matched and a minimum of 1,000 cc of blood made available for immediate use. Aseptic examination should then be undertaken in an operating room prepared for immediate Caesarean section. In the present case, no attempt was apparently made to investigate the cause of bleeding or to obtain blood on admission.

The second point concerns adequate hospital facilities. Adequate hospital laboratory and blood bank facilities are essential in the management of major obstetrical complications. Laboratory studies were apparently not obtained until the patient had been in the hospital for more than a week and then only after she experienced profuse vaginal bleeding. Blood for transfusion was not available in the hospital and the patient's family did not respond when requested to secure donors. If blood or blood donors were not available, the patient should have been transferred to a hospital having a source of blood supply.

Third, while Caesarean section is the generally accepted method of management for placenta praevia, it should not have been attempted when the patient's hemoglobin was only 6.0 grams. The average blood loss at Caesarean section is usually more than 500 cc. This would seriously deplete the patient's already-low stores of hemoglobin.

Fourth, it appears that the patient went into shock two days post-partum. At this time, her hemoglobin was only 4.0 grams. The use of Levophed in the primary management of shock associated with blood loss is generally inadvisable. Blood is needed and if not immediately available, a plasma expander such as Dextran is necessary. The family should assume a portion of the responsibility for failure to secure blood donors.

SUMMARY

A maternal death is described in which hemorrhage from placenta praevia appeared to be the major cause of death.

Bleeding in the third trimester of pregnancy is a serious complication and prompt investigation and management are indicated. Adequate hospital facilities including laboratory and blood bank are essential in the management of patients with bleeding in late pregnancy. Hemorrhagic shock should be treated by blood replacement and not by pressor drugs. ★★★

653 North State Street

NOBEL PRIZES

Since 1901 when the Nobel Prizes in medicine were first granted, medical men of America have won 36 per cent or 27 of 76 medals with Germany second with 10 winners.

SOCIOECONOMICS

Social Security and Medical Care

C. D. TAYLOR, JR., M.D.
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The Social Security program, enacted in 1935, has become the chief vehicle for federal medical care proposals. Progressive, liberalizing amendments, usually passed in election years, have gradually woven government care programs into the fabric of the initial act. Without these changes, the medical profession would have little or no interest in the program.

"One world" influence, mostly from the International Labor Organization, and that of domestic labor unions are pushing for drastic changes to total welfarism. Forand-type legislation seems to be the end objective of liberal foundation building in tax-supported benefits.

THE SOCIAL SECURITY ACT was passed by the 74th Congress and became law in August 1935. Had it remained in or near its original form, the chances are it never would have become a matter of concern to the medical profession. As originally enacted, the law contained 15 titles, covering a wide range of subjects including old age "insurance," aid to the blind, aid to dependent and crippled children, aid to the needy aged, grants for maternal and child welfare, and unemployment compensation. Title VI, Public Health Work, was repealed in 1944 when separate laws in this connection were enacted.

Neither the American Medical Association nor the Mississippi State Medical Association has taken any position since 1935 as to the wisdom or desirability of the Social Security program as initially conceived. In 1937, the constitutionality of the act was tested and upheld before the Supreme Court and since that time, it has been drastically and repeatedly amended, usually in election years. By reason of these amendments, the original Social Security Act has become the chief vehicle for expanding programs of federal health care.

THE FIRST FEDERALIZERS

The ultimate objective in federalization of all medical services was presented to the Congress when the Wagner-Murray-Dingell national health insurance bill was first introduced in 1943. This legislation proposed amending Title II of the Social Security Act to establish comprehensive hospital and medical services for the entire population under a tax structure. Subsequent versions of the Wagner-Murray-Dingell bill were rewritten so as not to be amendments to the Social Security Act, proposing instead entirely separate programs.

In the years from 1948-51, the Wagner-Murray-Dingell frontal assault on private medical care was fought out in the Congress. The legislative proposal had the backing of the Truman administration for whom Mr. Oscar Ewing, then Social Security Administrator, was chief spokesman. Organized labor also supported the proposal. The long and active campaign spearheaded by the American Medical Association was successful and the Congress became convinced that the Ameri-

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Secretary, Board of Trustees, Mississippi State Medical Association.

Read before the State Medical Legislative Conference, Mississippi State Medical Association, Jackson, November 12, 1959.

can people wanted no part of socialized medicine in the form proposed. Rather than ending, the fight was only begun.

Within the present decade, the proponents of welfare statism altered both their strategy and tactics. Recognizing that their objectives could be gained more easily piecemeal than at one time, they instituted a progressive, related series of amendments to the Social Security Act, most having to do directly with health and medical services. Their record of achievement has been all too successful and if the Forand Bill were enacted into law, the pattern of socialism for the United States would then have been cut from the cloth of free enterprise, awaiting only the tailor's needle to sew up the shroud.

ILO'S MANIFESTO

In 1952, at Geneva, Switzerland, during the Annual Meeting of the International Labor Organization, a program establishing minimum standards for Social Security was adopted. This action has become the world-wide pattern for Social Security and here's what it calls for:

1. Old age and survivors benefits providing a comfortable living rather than a subsistence.
2. Permanent and total disability payments.
3. Weekly benefits for unemployment of any cause, meaning inability to secure a job, sickness, or accident. It is clearly seen that this proposal achieves nationalization and socialization for the present free-enterprise Workmen's Compensation system.
4. Maternity benefits—with no income restrictions placed on this particular demand.
5. Monthly payments to each family for each dependent child.
6. Lump sum job separation payments.
7. National compulsory health insurance or, in plain language, total socialization of all health and medical care.

At the Geneva ILO meeting, there were three United States representatives; two voted for the Social Security program, these being the labor and government representatives. The single employer or business delegate voted against it. Since 1952, the United States Department of Labor, using tax funds appropriated for this purpose by the Congress, has actively crusaded for this program. The United Nations, which receives large American tax support, also favors the program with a fervor difficult to describe.

WAGE "FREEZE" AND DISABILITY

Provision for temporary sickness and permanent disability benefits under the Social Security system has long been a basic objective of welfare state advocates. In 1954, the first disability provisions were added to the basic act providing for a "freeze" in the coverage-contribution status at the average monthly wage of a worker if he becomes totally disabled for a period of more than six months. This has the effect of continuing the worker's credit in pension aspects of the program when his income stops by reason of disability.

In 1956, H.R. 7225 was enacted in the 84th Congress by a margin of only one vote. Among other things, this bill provided a system of cash disability payments for those persons aged 50 and over who become permanently and totally disabled. After one year of operation under this amendment, nearly one-half million persons were receiving cash disability benefits and another three hundred thousand have been granted the disability freeze. In just two years, federal agency personnel concerned with administration of this provision have increased 400 per cent.

PUBLIC ASSISTANCE MEDICAL CARE

Although not currently effective in Mississippi, most states have implemented welfare aspects of Social Security providing medical care to four categories of persons defined in the law. As initially established in 1935, Social Security provides federal grants to states for use in making payments to these classes of indigents: (1) aid to the blind, (2) aid to the totally and permanently disabled, (3) aid to dependent and crippled children, and (4) old age assistance.

At the time of enactment, many persons felt that state governments—then in the depths of the depression—could not finance adequate public assistance for these groups of indigents. These programs were intended to be—and remain today—essentially state programs. This assertion is demonstrable in view of the fact that the federal government may not implement this program in a state without consent of the legislature and appropriation of state matching funds. In 1936, this aspect of Social Security amounted to $209 millions but in 1959, it was about $2 billions, an increase of 1,000 per cent.

Until 1950, money for medical care was paid directly to public assistance recipients as part of their over-all benefits and not earmarked as such. In 1950, the Congress amended the Social Security Act to permit states to make payments directly to the vendors of health care rather than to the recipients. At that time, about a third of the states began to pay a portion of public assistance funds for medical care directly to physicians and other providers.

In 1956, Congress again revised the method of payment by establishing a separate federal-state matching program for medical care payments. At that point, states had a choice of retaining the vendor payment system or accepting the separate matching program for receiving federal dollars for medical care. Usually, this was administered through a state-level welfare program.

In 1958, amendments to the Social Security Act governing payments for medical care were again revised. The separate matching program was discontinued and the determination of the method of payment for medical care to public assistance recipients was returned to the states. As the law now stands, public assistance medical care for the four categories of indigents is an even federal-state funding program, each providing $3 per month for all categories except aid to dependent children where $1.50 per month is authorized.

ELECTION YEAR BONANZA

This brief chronology of legislative evolution is an oversimplification of the extent of Social Security. The easy expansion of the federal benefit system has been an election year spectacular in 1950, 1952, 1954, 1956, and 1958. Perhaps one reason for this—apart from the vote bait aspects—is because the plan has been developed to make the tax burden fall very lightly on the present generation of workers and voters, thereby shifting it to future generations who will have to pay the bill.

Some experts in the actuarial sciences feel that the whole program as now contemplated may cost the nation 30 per cent of its payroll as a minimum and might run as high as 40 per cent. At present, Social Security taxes on wages in France are about 30 per cent of earnings.

Apart from philosophical objections to medical care aspects of Social Security, the Mississippi State Medical Association has pointed out in testimony to the Congress and at other times fallacies in its basic concept. As regards the latter, federal administrative personnel, welfare workers, and others use the expression "old age and survivors disability insurance." Taxes levied in behalf of Social Security are called "contributions for coverage." These are misleading and, in fact, false. Here's why:

1. The United States Supreme Court has held that Social Security is not an insurance program.
2. Social Security is basically a tax program and the taxpayer has neither vested nor guaranteed rights in the benefits.
3. No contract exists with respect to Social Security between the individual and the government.
4. Under Social Security, the tax rate and benefits structure can be—and have been, on many occasions—changed by a simple majority vote of one in the Congress. In contrast, insurance is based upon a fixed contract with stated obligations and benefits.

This commentary is intended to bring the full meaning of Forand-type legislation into clear perspective. What has happened in 24 years of Social Security has been nothing more than a patient, diligent, but highly successful progressive program of foundation building for total federal health care.

Our tasks as physicians are clearly defined. We must act promptly and decisively to preserve as best we can our system of free choice and free enterprise in health and medical services. We have an obligation to preserve and perpetuate both the quality and quantity of medical care which has made us the healthiest nation in the world. To do anything less is to forsake our profession and the people we serve. ★★★

113 Davis Avenue

L'MEETING MAGNIFIQUÉ

Bob Hope, celebrated comedian, has a way of putting it. Describing a recent medical meeting at a swank Miami Beach hotel, he expressed astonishment at plush convention facilities offered the visiting doctors.

"Why," he intoned with disbelief, "the place is so exclusive that even room service has an unlisted number. Instead of imported carpets in the lobby, they have real Persians—lying wall to wall!"

The President Speaking

STANLEY A. HILL, M.D.
Corinth, Mississippi

'Sixteen Equals One'

THIS PARADOXICAL TITLE becomes a proved equation when the roster of component societies is tabulated. The Mississippi State Medical Association is composed of 16 parts. February has been designated as component society month in order to enhance the recognition of each society. The impetus originating in the conference of component society leaders this month should increase efficiency of function for many months to come. It is fitting that the vital roles of component societies be emphasized during a bissextile year. Time has accrued in the calendar at the rate of six hours annually the last four years yielding an additional 24 hour period, February 29. The component society likewise may add fractions of service to its record of accomplishments.

The salute to the component society is not a signal to slow down but rather an encouragement to open the door of opportunity to serve the members better. When any unit of our association renders service to its members, the citizens of the Commonwealth of Mississippi have been benefited.

The scientific program is fundamental. Each society should constantly strive to strengthen the quality of its program. Currently, there is need for developing individual members into program participants; it is not enough to feature visiting speakers. In addition to the guest speakers there should be papers originating locally. When this is accomplished, we are developing our own talent. This writer believes there is much of value being lost because it is not recorded. So, doctor, I challenge you. Make careful case records; record progress daily as indicated. Soon you will have a series from which deductions may be made and reported to your colleagues at the county meeting.

On the administrative side, it seems that over-all committee functioning is rather good. Dues collecting and remitting may be improved in several of the components. One society is to be commended in that upwards of 90 per cent of dues for the coming year are relayed to the Central Office during November and December of the old year. The important points follow: The members have been reminded that it is dues paying time. They gain the habit of being prompt. Partial payments of the portions that go to M.S.M.A. and A.M.A. favor our Comptroller by spreading the work load. This also lessens the tendency to mistakes in bookkeeping.

Each individual member is urged to execute one more task that will improve the medical society. Then, in turn, the challenge goes out to the officers of the several component societies to work daily, including February 29, toward increasing the efficiency of the function of your organization. The satisfaction of a job well done will be a lasting reward. ★★★

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Recent Advances In Cardiovascular Disease

Guest Editorial

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CARDIOLOGY MOVES on so many fronts that appreciation of the varied and numerous advances in the field and their direct and indirect relationships to the "practical" application of these discoveries poses a problem for any reviewer. No more concise or effective way can be formulated than the appraisal of each etiologic group of heart disease. Thus, it can be seen that the division into: (1) coronary artery disease, (2) hypertensive heart disease, (3) rheumatic heart disease, and (4) congenital heart disease is a valid and reasonable way of attacking this problem.

The most refreshing and interesting studies in the field of coronary artery disease have to do with the debunking of the theory that definite clinical advantages can be secured for the patient by his following a low cholesterol or low fat diet, if the factor of weight reduction in itself is not included. The evaluation of different materials in the lowering of cholesterol, their efficiency in terms of morbidity, mortality and longevity tables have by no means been completed and the present feeling of most investigators in the field of arteriosclerosis is that any diet, to be effective, must be begun many years prior to the clinical recognition of the coronary artery disease. Further, studies on physical activity and inactivity as a general factor in the relationship to coronary artery disease and coronary occlusion has been investigated and at the present time it is not possible to estimate the size and importance of this factor in its relationship to caloric balance, lipid hemostasis, pathological incidence of coronary artery disease, etc.

There is growing interest in the possibility that nervous and social strain in work induce some stress reaction connected with cardiovascular disease. The occupation with the highest mortality from coronary artery disease in one table was shown to be "light" occupations (involving less than two calories per kilogram per hour), but there is clearly a wide range of coronary death rates among "light" occupations and the problem is obviously not at all simple. Based on a numerical evaluation of 100 to denote the average, busi-

ness managers showed a ratio of 112 and commercial company secretaries showed a ratio of 115; both of these occupations would probably be classed as executive in this country. Office clerical workers had a ratio of 132; bureaucrats averaged surprisingly well with a top public official ratio of 94. The figure for foreman was 99, just average. However, none of these figures approached the extremely high incidence occuring in the so-called "light" operations of radio and telegraph operators, Roman Catholic priests, dock and harbor officials, chemists, physicians, commercial brokers and agents, clergymen, musicians, and garment workers. It is quite probable that the actual relationship of so-called stress factors will never be clearly outlined.

The most important surgical development in the field of coronary artery disease, in this writer's opinion, has been the standardization of direct vision coronary endarterectomy as performed by Longmire of the University of California. This direct procedure eliminates all of the differences of opinion concerning the value of trying to increase intramural coronary anastomoses or by increasing arterial flow into the coronary artery system by means of operations such as the Beck operations, the Thompson poudrage operation, ligation of the internal mammary arteries, etc. The mortality rate described by Longmire has not been too frightening and coronary artery endarterectomy is envisaged as a rather routine procedure for selected patients in the foreseeable future.

It seems that the actual number of cases of true hypertensive heart disease without any obvious clinical component of coronary artery disease is becoming much more unusual and this is probably due to the increased efficacy of the anti-hypertensive drugs. Certainly, nothing new except more potent antihypertensive drugs has been added to the physician's armamentarium and the treatment of hypertensive heart disease, of course, is just simply the control of essential hypertension and other forms of secondary hypertensive disease. The more accurate recognition of the latter group, such as unilateral renal disease, pheochromocytoma, and primary aldosteronism has removed a small percentage of these cases from the realm of the internists, but the vast majority of hypertension is still probably of the so-called "essential" type and is managed almost exclusively by the internists. Sympathectomy seems to have faded away completely in the last ten years and the other reasonable adjuncts to management such as weight reduction, and handling emotional problems of the patient are still of great value in this disease.

RHEUMATIC HEART DISEASE

Rheumatic heart disease has been almost completely revolutionized by the surgeon. True, the instance of rheumatic heart disease has been markedly decreased by the early and efficient use of penicillin in streptococcal infections, and it is estimated at the present time that rheumatic fever has been decreased by 55-60 per cent in the last ten years. However, we still have a large backlog of rheumatic valvular disease and it is in this group that the most striking developments have been pushed by the surgeons. The mitral commissurotomy is now an accepted surgical procedure, exciting little attention and posing a mortality rate of probably less than two per cent in good hands.

The attack on other types of rheumatic valvular disease, such as aortic stenosis and insufficiency and tricuspid stenosis, is much less common and less rewarding, both to the patient and to the surgeon's pride, but direct vision open-heart surgery offers a great deal of hope in these particular cases and it seems certain that in the next few years prosthetics can be used to replace hopelessly deformed valves not amenable to the usual surgical correction. The surgery in this field has become so routine that patent ductus arteriosis and coarctation of the aorta are now handled in most general hospitals without any fanfare and with a surprisingly low mortality rate.

It is in the field of open-heart surgery with repair of atrial and/or ventricular septal defects that the most encouraging work is being done at the present time. It can be stated safely that the repair of the usual interventricular septal defect in a child of three years of age or older can be done with less than 10 per cent mortality. If it has to be carried out on an infant in heart failure, of course, the mortality approaches 30 per cent, but practically all of these children will have a rather hasty exodus if surgery is not done and the 70 per cent recovery rate is surprisingly encouraging for this condition. Open-heart surgery for atrial septal defects, especially for the ostium-secundum type, poses a mortality rate of no more than five per cent and, as this particular type of atrial septal defect makes up 90 per cent of all atrial septal defects, surgical recovery in this condition can be seen as rather striking.

TETRALOGY OF FALLOT

At the present time, anastomotic procedures in the so-called "blue baby" or Tetralogy of Fallot group is being supplanted by direct vision open-heart repair of the ventricular septal defect and

(Turn to page 62)

Mr. Kefauver, Drug Prices, And Common Sense

I

Senator Estes Kefauver, a Southerner by accident of geography and a liberal almost without a peer, conducted a pharmacological circus at Washington during the second week of last December. As ringmaster of the Senate Antitrust and Monopoly Subcommittee, he tried to make the American pharmaceutical industry jump through hoops. As a propaganda performance, the hearings were successful; as to factual findings, issues elicited remain to be judged.

The December hearings were the first in a series, according to Chairman Kefauver, on pricing practices in the drug industry. The subcommittee's rightful interest is not how high or low drug prices are but whether conspiracy and collusion in fixing prices exists among manufacturers or not. As it really was, the hearings were little more than a public flogging of the American pharmaceutical industry. The subcommittee's staff economist, John M. Blair, accused manufacturers of making profits up to 7,000 per cent above basic costs. Unfortunately, the accusations got more headlines than the drug companies' replies.

II

No drug manufacturer should be defended simply because he makes medicinals. In the first place, if his product or pricing practices are manifestly bad, the free market soon rectifies the situation. A vast majority of American physicians prescribes only those tested, quality preparations indicated for proper treatment in minimum quantities required at the lowest possible price available. The same vast majority of doctors has no interest in pharmaceutical manufacturers other than in sharing the universal desire for more and better medicinals at fair, competitive prices.

The Mississippi State Medical Association has this same interest and none other. It owns no drug stocks, holds no patents on formularies or proprietary compounds, and—like the doctor—is trying to work itself out of a job by seeking only successful treatment of disease and injury. M.S.M.A. has no fish to fry in behalf of the drug industry.

But Mississippi physicians and their state medical association insist upon the game being played fairly, with all ground rules observed and everyone given an equal opportunity at bat.

III

During the hearings, the Kefauver subcommittee seems to have overlooked certain key facts. These are basically the same facts omitted from diatribes on " . . . the high cost of medical care" from the standpoint of physicians' fees.

While hurling charges at ethical manufacturers that corticosteroid tablets costing two cents to make are retailed for as much as 30 cents, the subcommittee made virtually no reference to research, clinical testing, marketing, and distribution. All of these are vital factors which must be included in the cost of drugs.

In 1958, American pharmaceutical manufacturers spent almost $200 million on research. All of this is a real contribution to medical science and private business picked up the tab. One drug corporation reports averaging three to five years in investigating compounds before any can be judged potentially effective. Moreover, only one experimental compound in a thousand ever reaches the local pharmacy. These are odds which would make the wildest oil wildcatter reach for his hat and leave. No gambler in his right mind would give a 1,000-to-1 play a second look. But the American drug industry does it every day.

Andrew Mashberg of the Health News Institute recently reported that 8,000 different compounds were investigated in the development of isoniazid. Another company, he continued, studied 34,000 potential antibiotics and 8,000 chemicals in their search for better broad spectrum agents. Of the 42,000 compounds investigated, only six were considered worthy of clinical testing.

When initially produced, cortisone cost three times its weight in diamonds. The drug industry expended millions in learning to synthesize it from ox bile, had it on the professional market in less than two years for about one one-thousandth of its original cost, and proceeded to reduce that 25 per cent the next year. Penicillin decreased 99 per cent in cost during the first decade of its manufacture and use.

IV

But what about the patient who must have the drugs and pay the bill? According to HNI studies, four out of ten Americans complain about the cost of drugs. Significantly, the same group also complains about the cost of food, clothing, and housing. Others vary in their opinions, but the best judgment of a drug price came from the mother-in-law of a Smith, Kline and French executive when she bought a prescription of that firm's

making for $4.80. Asked by her son-in-law if she thought it was worth the money, the lady wisely replied, "It's worth it if it works."

In 1958, the average prescription cost $3.08 but there is more to it than an average price paid. By no means does this explain away recurring drug costs incurred in long-term therapy nor the occasional Rx with a $15 price tag. But there is a far greater significance to the true cost story.

In 1928, lobar pneumonia flattened a patient in the hospital for four to five weeks. The mortality was about 33 per cent. With all care expenditures considered together with loss of earnings, as much as $1,000 was involved for those fortunate enough to be spared funeral expenses.

In 1960, the ordinary case of lobar pneumonia has a duration of less than two weeks and usually requires no hospitalization. Antibiotics or broad spectrum chemotherapeutic agents run between $15 and $30 for adequate care of the case. Of course, the physician's fee is proportionately less than in 1928 because of the shorter care duration. And mortality is now only slightly more than 3 per cent.

As recently as 1940, Children's Hospital at Boston reported 305 cases of mastoid abscess. Painful surgery with long aftercare did well to preserve life and often left impaired hearing. Because of antibiotics, some young physicians today have never seen a mastoid abscess.

V

Martin emphasizes that there's a great difference between *costs* and *expenditures*. The former is the amount which must be given in exchange for a unit of a good or service. The latter is the total sum laid out for the number of units purchased. Mr. Kefauver's staff economist gives little evidence of understanding this fundamental tenet of basic economics.

During the past 30 years, expenditures for drugs have increased as have expenditures for food, clothing, housing, automobiles, and tobacco. But the important aspect to recognize and identify in the drug portion of medical care costs is that the American public's outlay for medicine is proportionately the same today as it was 30 years ago. And look what that share of the health dollar is buying when put to use in the hands of today's physician.

VI

As likely as not, there'll be further hearings on drug prices during the present session of the Congress. There will be more accusations of fantastic profits despite the fact that drug manufacturers enjoy earnings merely comparable with those of other prosperous, vigorously managed corporations.

There will be attacks on the drug industry's advertising practices which if abandoned tomorrow would drop prices only three cents per therapeutic unit sold. But the gimmick is that there would be fewer and fewer competitive products and unit costs would inevitably rise above present levels. Advertising is the life blood of an industry whose products are predestined to obsolescence before they are marketable.

It is unfortunately true that the same factions complaining about drug prices, physicians' fees, hospital costs, and the price of everything are the same factions which would have the federal government practice medicine, construct public housing, and exercise total paternalism—as long as the tax dollar and national credit holds out.—R. B. K.

So They Got It Wholesale

Failure of one of the Lloyd's of London-affiliated insurance companies, British Commercial, may drag almost a hundred American physicians into bankruptcy along with it. They are among 4,000 who purchased professional liability insurance from " . . . Lloyd's of London and/or other companies" because it was priced below coverage offered by domestic carriers in the United States.

In California, at least 17 suits alleging malpractice have been filed against physicians whose liability coverage was underwritten in part or whole by British Commercial. Another 50 suits against similarly unfortunate doctors are pending. One $80,000 litigation has already been lost and is now being appealed; the physician-plaintiff's only insurance is from the defunct British Commercial. From 1953 to 1956, the scientifically elite American College of Physicians offered bargain professional liability coverage by British Commercial.

Three years ago, M.S.M.A.'s Board of Trustees declined a proposal for group professional liability coverage by " . . . Lloyd's of London and/or other companies." Subsequently, the Board gave Mississippi physicians the best advice they've ever had on purchase of this coverage—it's worth repeating here and now.

First, purchase only that professional liability insurance which is offered by a substantial American carrier operating in most general casualty lines and which is licensed to do business in most states including Mississippi. The policy contract should be that of the National Bureau of Casualty Underwriters' standard professional liability form with settlement options accruing to the assured physician.

Secondly, buy this coverage from a reputable, established, local insurance agent who will be around when and if he's needed. A mail order insurance broker in New York representing a foreign combine isn't worth much to a doctor at the crossroads when a plaintiff's attorney knocks on the door with a freshly filed declaration. Insurance is about as good—all reasonable legal and economic criteria having been satisfied—as the agent who sells and services it.

Thirdly, buy enough coverage. Three years ago, Dr. Howard A. Nelson, then president of the association, observed that " . . . when a physician needs more professional liability coverage, it simply isn't for sale." The association feels that those who perform surgery should carry limits of $100,000/$300,000.

And it goes without saying that no settlement of professional liability claims should be authorized by physician-defendants simply for avoidance of unpleasant publicity where the cause has no merit. Further, all such suits, actually instituted or merely threatened, should be reported promptly to the appropriate association trustee.

The moral of the story is simple and direct: 4,000 American physicians are discovering that their bargain premiums on foreign-company professional liability insurance are the most expensive dollars they've ever saved.

So they got it wholesale.—R. B. K.

Help Your Legislator

Picture yourself in this situation: You have virtually abandoned your medical practice to spend four months in Jackson, returning to your home community only on weekends. Although some say you put in a four-day week, you actually work fifty hours or more between Monday and Thursday. You have been asked to spend more than $260 millions in public funds while making sure the taxpayers get their money's worth. Few bother to thank you for agreeing with them but nearly everybody with whom you can't in good conscience agree swears to visit political mayhem upon you at the ballot box. You are interested in the well-being of your native Mississippi and in the orderly, progressive growth of her economic, social, and cultural institutions. But all this is a labor of love because you receive the princely emolument of $1,500 for all your blood, sweat, and tears.

You guessed it: You're a member of the 1960 legislature. If it were not for your determination to do a good job for something you believe in, you'd be tempted to toss in the towel. No doubt, you'd be grateful for more understanding, patient assistance, and sincere support.

Physicians have a rare opportunity to help their representatives and senators by taking just a few moments each week from busy professional routines. Jot a few informal, personal remarks to your local solon and drop them in the mailbox. Pick up the telephone and call him for a brief friendly chat. See him on the weekend when he's at home to take the local political pulse.

If your chamber of commerce sponsors weekly or semi-weekly luncheons for the county legislative delegation, be sure you attend. Explain medicine's viewpoints on issues under consideration and offer your special knowledge and experience as a physician where the representative or senator can use it effectively in the public interest.

Your legislator deserves your support and assistance. Part of the doctor's responsibility as a citizen is to offer this help.

"Incidentally, Mrs. Spencer, how long have I had you on prune juice?"

opening up of the pulmonary stenosis if possible. This is still not a completely standardized procedure, but in good hands the mortality rate is no more than 15-20 per cent at most. In the next five to ten years all Tetralogy of Fallots will more than likely be handled by direct vision surgery instead of by anastomotic surgery such as the Potts' procedure or the Blalock procedure. Even transposition of the great vessels is being handled with some degree of success by transplantation of the inferior vena cava and pulmonary veins with a retransposition of the venous returns so as to nullify the associated transposition of the arterial outflow vessels. Infants have been seen who have done surprisingly well following this surgery, emphasizing the fact that as the surgical technic develops the mortality rate should be lowered appreciably in this condition. Ebstein's disease, heretofore an incorrectable lesion, has now been approached by connecting the superior vena cava with the pulmonary artery through a homograph bypassing the hypoplastic right ventricle and the obstructing tricuspid valve.

DIAGNOSTIC ADVANCES

Probably equally as important as the surgical advances in congenital heart disease are the many and detailed articles concerning clinical and laboratory diagnostic procedures aimed at the early recognition of these cases so that the surgery can be done at the optimum time. It is quite surprising that an entire new specialty, namely pediatric cardiology, has developed in the last ten years and that the recognition of many types of congenital heart disease, heretofore considered as impractical and rather esoteric whimsy, has now been developed to a rather fine art by many clinicians who do not, by any means, specialize in pediatric cardiology. There is a great deal of hope that these children can thus be earlier recognized and referred for cardiac surgery at the optimum time.

★★★

838 Lakeland Drive

Anticoagulants are helpful in treatment of cerebral thrombosis after the first attack with 83 per cent surviving while 72.5 per cent survived without its use. In myocardial infarction (6 months after initial symptoms) 94.1 per cent had no attacks while on anticoagulants and 6.7 per cent had no attacks without its use. In irreversible vertebral basilar thrombosis 92 per cent survived with use of anticoagulants while only 42 survived without its use.

SIRS: It was a pleasure to receive Volume 1, Number 1, of Mississippi's new JOURNAL. Please permit me to congratulate you and your staff. This is a fine issue in every way and, I feel sure, will be the pacemaker for another member of the group of state medical journals.

GEORGE W. COVEY
EDITOR
NEBRASKA STATE MEDICAL JOURNAL
LINCOLN, NEBRASKA

SIRS: I have just finished reading the first issue of the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION. The new cover format is attractive. The arrangement, printing, and contents are excellent.

A. L. GRAY, M.D.
EXECUTIVE OFFICER
MISSISSIPPI STATE BOARD OF HEALTH
JACKSON, MISSISSIPPI

SIRS: Congratulations on Number 1 of Volume 1 of your new JOURNAL. You have done a wonderful job.

JOHN E. FARRELL, SC.D.
MANAGING EDITOR
RHODE ISLAND MEDICAL JOURNAL
PROVIDENCE, RHODE ISLAND

SIRS: Congratulations to you and your staff on the first issue of the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION.

RAYMOND F. GRENFELL, M.D.
JACKSON, MISSISSIPPI

SIRS: I wish to take this opportunity to compliment you and the Mississippi State Medical Association on the first issue of your JOURNAL. The format, the content, and the general make-up of this publication deserves the highest commendation.

JOE D. MILLER
FIELD REPRESENTATIVE
AMERICAN MEDICAL ASSOCIATION
CHICAGO, ILLINOIS

SIRS: Your first number has been received and I certainly wish to congratulate you upon both the excellent text and its attractive appearance. I shall look forward to receiving this magazine each month.

WILLIAM M. COLMER
MEMBER OF CONGRESS
6TH DISTRICT, MISSISSIPPI

Foreign Journals

Referral for Psychotherapy. D. J. Watterson: Brit. Col. M. J. 1:250-251 (April) 1959.

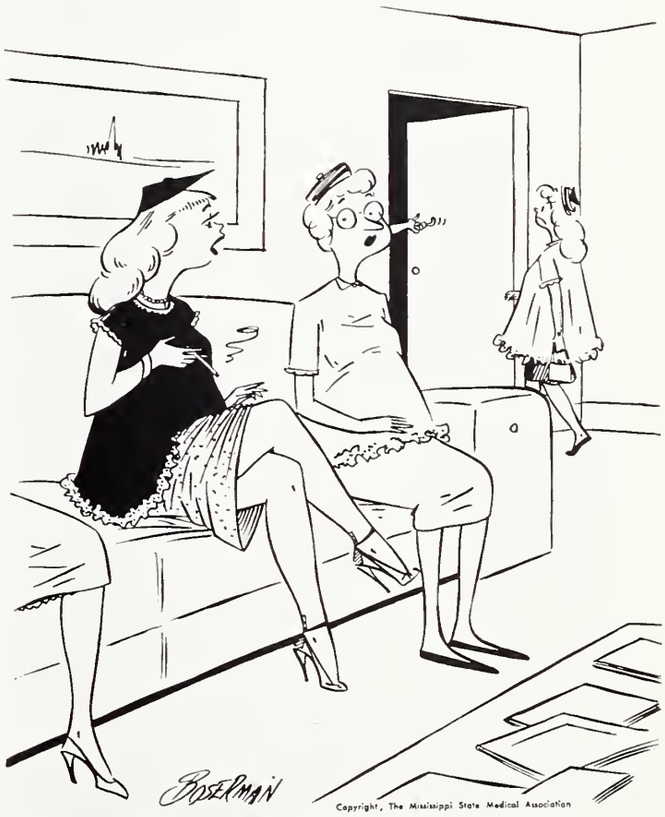
Psychotherapy, which may be given alone or in conjunction with other treatment measures such as manipulation of the environment or drugs, differs from social case work in that, whereas the social worker aims at better adjusting the patient to his existing situation, the psychotherapist aims primarily at producing intrapsychic changes so that the patient may better adapt himself to his environment and his environment to himself. The goal of psychotherapy may be merely the resolution of some immediate problem causing emotional disturbance; it may be the remission of symptoms or it may be the resolution of a chronic pattern of neurotic behavior.

Unlike most other treatment methods in medicine, one of the major indications regarding treatability by psychotherapy is the state of maturation of the patient. Moreover, unlike many areas of medicine in which diagnosis is a prominent criterion regarding applicability of a given treatment, formal diagnosis has only limited relevance where indications for psychotherapy are concerned. Formal psychotherapy, however, is not indicated in the toxic-confusional psychoses, the organic dementias, and in states of severe melancholia.

It is little indicated in the treatment of intellectually backward patients and it is ineffective in patients who come for treatment under coercion. Its main areas of usefulness are in the psychoneuroses, the personality disorders, and in the early and the ambulant schizophrenic psychoses. Favorable criteria for the use of psychotherapy are adequate intelligence, some ability to verbalize, the potentiality for developing insight, positive motivation, and the desire for personal change.

All physicians undertake simple psychotherapy in their everyday practices. For example, reassurance after a physical examination provides a common instance of brief psychotherapy. Usually, the general practitioner cannot afford the time for more than brief and infrequent psychotherapy sessions and the patients who require longer and more frequent sessions are better referred to a psychiatrist. The same conclusion applies to those patients for whom the psychotherapeutic relationship needs to be deep or intense.

In the case of patients showing very marked disorders of affect or behavior there is usually no question of immediate psychotherapy; the patient is referred for psychiatric consultation and possible hospitalization. However, in many instances, the proper referral should be for psychiatric consultation in the first place with the expectation that psychotherapy may follow. Referral of this sort is indicated under the following circumstances: The development of emotional disturbances which are not understood or which are not commensurate with the possible etiological factors; an increase of not obviously explicable symptomatology; recently developed emotional disturbance which fails to respond to a few weeks of general medical support; states of depression in which the suicidal risk is difficult to evaluate; patients who become disturbed in their relationship with the physician; patients who specifically seek psychotherapy, unless there are obvious contraindications; patients toward whom the physician finds himself feeling negatively or inappropriately oriented.



"The part I hate most is giving up my Jaguar."

MEETINGS

NATIONAL AND REGIONAL

American Medical Association, June 13-17, 1960, Miami Beach. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago 10, Ill.

American Medical Association, Regional Conference on Aging, March 7-8, 1960, New Orleans. Mr. George W. Cooley, Secretary, Council on Medical Service, 535 N. Dearborn St., Chicago 10, Ill.

Southern Medical Association, October 31-November 3, 1960, St. Louis. Mr. V. O. Foster, Executive Secretary, 2601 Highland Ave., Birmingham 5, Ala.

American Academy of General Practice, March 19-24, 1960, Philadelphia. Mr. M. F. Cahal, Executive Secretary, Volker at Brookside, Kansas City 12, Mo.

STATE AND LOCAL

Mississippi State Medical Association, May 10-12, 1960, Jackson. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson, Miss.

Mississippi Academy of General Practice, September 28-29, 1960, Jackson. Miss Louise Lacey, Executive Secretary, Walthall Hotel, Jackson, Miss.

Amite-Wilkinson Counties Medical Society, First Tuesday March, June, September, December. S. E. Field, Centreville, Miss., Secretary.

Central Medical Society, First Tuesday Monthly, 6:30 p.m., Robert E. Lee Hotel, Jackson, Miss. C. G. Sutherland, 918 N. State St., Jackson, Miss., Secretary.

Claiborne County Medical Society. D. M. Segrest, Port Gibson, Miss., Secretary.

Clarksdale and Six Counties Medical Society, Fourth Wednesday March and September, 2:00 p.m., Clarksdale, Miss. Robert R. McGee, 150 Yazoo St., Clarksdale, Miss., Secretary.

Coast Counties Medical Society, First Wednesday March, June, September, and November. Charles N. Floyd, 1412-23rd Ave., Gulfport, Miss., Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Miss., Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando, Miss. L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, Second Tuesday Monthly. A. Wayne Sullivan, 1204-21st Avenue, Meridian, Miss., Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Monthly, 7:30 p.m., Natchez Country Club, Natchez, Miss. W. T. Colbert, 539 Park Place, Natchez, Miss., Secretary.

North Central District Medical Society, Second Wednesday March and September. W. A. Middleton, 214 Summit St., Winona, Miss., Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December, Tupelo, Miss. Eugene M. Murphey, III, 421 Main St., Tupelo, Miss., Secretary.

North Mississippi Medical Society, First Thursday January, April, and October, Oxford, Miss. R. L. Wyatt, Holly Springs, Miss., Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. George B. Stewart, 215 Kirkwood St., Picayune, Miss., Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. Thomas F. Puckett, 715 Arledge St., Hattiesburg, Miss., Secretary.

Tri-County Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Miss., Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg, Miss. Thomas H. Mitchell, The Street Clinic, Vicksburg, Miss., Secretary.

The average person is sick in bed 7.8 days per year, an average of 6.9 days for males and 8.7 days for females. Forty-nine per cent of this confinement is the result of respiratory conditions.

The number of patients in V.A. hospitals tops all records with a daily patient load of more than 100,000 as compared to 50,000 in 1940. Thirty-three per cent of all new doctors and 59 per cent of occupational therapists were trained by V.A. last year.

Medicare Restoration

Mississippi physicians have generally expressed satisfaction with restoration of most care authorities in the Medicare program, put back on the pre-1958 operational basis a month ago. Limitations are relatively minor and most agree that initial intent of the Congress is being carried out.

Included in program restoration are most surgical procedures for which medical indication exists, care of acute emotional disorders constituting an emergency not exceeding 21 days hospitalization, pre- and post-hospitalization diagnostic tests, and treatment of injuries not requiring hospitalization on an outpatient basis. Continued without change are complete obstetrical and maternity service, care of injuries requiring hospitalization, inpatient treatment of all acute medical (non-surgical) conditions, and surgical care of all acute or emergency disorders.

PERMIT SYSTEM CONTINUED

Dependent spouses and eligible children residing with service sponsors must seek care at military medical facilities but where such care is neither available nor adequate, a permit will be issued. This simply places the wife or child in a position of free choice. The permit, DD Form 1251, guarantees no care or payment, merely indicating that the dependent has cleared with appropriate service authorities as to service facilities.

Those dependents residing apart from service sponsors who are overseas or in remote domestic posts continue to have full, free choice between service and private care. No special documentation in this connection is required beyond the dependent's statement and signature on the Medicare claim form.

When a dependent residing with a service sponsor receives care from private sources, the attending physician must attach the original copy of the permit to his claim. Consultants and other physicians assisting in the care need no copies of the permit. Exceptions to the permit requirement are limited to care rendered in *bona fide* acute emergencies so certified by the attending physician and to dependents temporarily absent from sponsors on a trip.

NEW SURGICAL AUTHORIZATIONS

Almost any surgical treatment is authorized if a valid medical indication for the procedure exists. Exceptions include cosmetic and reconstructive procedures; sterilization for multiparity, socioeconomic or psychological reasons; surgical intervention for correction of infertility or sterility; and care of chronic conditions not in an acute phase.

Examples of procedures for which medical indication must be shown to exist are eye surgery for glaucoma, cataract, strabismus, or vision improvement; rhinoplasty for improvement of nasal respiratory physiology; and removal of nevi, hemangiomas, and telangiectatic lesions which are bleeding, ulcerated, showing clinical evidence of malignancy, or impair function. Tubal ligation or other sterilization procedures are payable only where indicated in the management of an otherwise unrelated condition for which care is authorized.

"They're called 'wonder drugs' because they work wonders . . . not because we wonder how they work!"

New Handbook on Chemical Tests for Intoxication

The American Medical Association's Committee on Medicolegal Problems has published a new handbook, "Chemical Tests for Intoxication," expected to strengthen law enforcement agencies' effectiveness with new knowledge. The 103-page manual is designed to supply information which will assure the competent and proper use of such chemical tests.

"It is hoped," the publication states, "that all enforcement agencies will adopt chemical tests in all cases of suspected drinking to insure protection of the innocent as well as conviction of the guilty.

"Chemical tests are invaluable," it continues, "because for the first time they take the matter of the sobriety or drunkenness of the individual from the realm of speculation and reduce it to almost mathematical certainty. With these tests, judges and juries no longer have to depend entirely on the opinion of (non-professional) witnesses based upon objective symptoms."

The manual includes statistics on the role of alcohol in traffic accidents, a description of chemical tests and commercial devices for measuring drunkenness, legal aspects of chemical tests, and suggestions on how to organize a program of testing for intoxication. The booklet reaffirms A.M.A.'s long-standing recommendation to law enforcement agencies to adopt uniform, accurate chemical testing for the tipsy.

Four independent surveys recently showed that alcohol is involved in half of the nation's motor vehicle accidents. Also agreed was that the death and injury toll can be materially lessened by eliminating the alcohol factor. A.M.A. spokesmen said that a sound testing program of suspected drunken drivers " . . . is bound to inspire compliance with the law.

"It puts the police department in the enviable position of being able to tell drivers what is going to be done and then to be able to do it with legal and medical backing."

Written by experts in the fields of medicine, law, and traffic safety, it is believed to be the only authoritative publication on the subject available. It will be sold for $1 per copy but is furnished free to A.M.A. members who write Law Division, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

New Radio Series

Common illnesses that strike Americans and their treatment by family physicians are subjects for a new radio series just begun by the American Broadcasting Company. Entitled "Highroad to Health," the weekly feature is being presented with the cooperation of Lederle Laboratories, a division of the American Cyanamid Company. A.M.A.'s Physicians Advisory Committee on Radio and Television is assisting, checking script authenticity and pertinence of program materials.

A new, different radio format offering nine minutes dramatization followed by five minutes discussion of the problem by a guest physician will make for fast-moving continuity. A network star will host each program, acting as friendly interrogator of the medical experts.

Weekly subjects scheduled for winter broadcasts include hypertension, acute childhood infection, cancer, household accidents, toxemia of pregnancy, chronic illness, care of the aged, mental disorders, rheumatic fever, tetanus, nutrition, and medical emergencies. Both network and sponsors are stressing public service with usual "hard sell" commercials happily absent.

"Highroad" may be heard on Mississippi ABC stations at Booneville, Greenwood, Gulfport, Hattiesburg, Jackson, Kosciusko, Laurel, and Tupelo where local newspapers will publish time schedules.

ABC's famous John Charles Daly, center, discusses "Highroad to Health," new network feature, with Dr. Benjamin W. Carey, left, of Lederle and Dr. Gerald Dorman, New York, right, who represents A.M.A.

V.D. increased 10 per cent among teen-agers from 1957 to 1958. Gonorrhea has increased while syphilis has decreased.

Fifty per cent of all physicians surveyed in private practice own common stocks.

Council on Medical Service Sets M.S.M.A. Position On Indigent Care Law

Improvement in Mississippi's indigent medical care law under which the State Hospital Commission operates will be sought in the current regular session of the legislature by M.S.M.A. This was the decision of the Council on Medical Service meeting at Jackson recently when action to increase state reimbursements to hospitals was taken within the framework of a House of Delegates mandate from the 91st Annual Session last year.

Dr. Lawrence W. Long, chairman of the medical service group, said that ". . . the program is practical, realistic, and within the means of the state to provide. We will seek an increase in hospital reimbursement rates from the present level of $6 per day for acutely ill indigent general medical and surgical patients to $10."

A three-point program is being placed before the legislature seeking (1) a $2,500,000 total biennial appropriation for the State Hospital Commission—an increase of $1 million, (2) an increase to provide $10 per day for hospitalization of the indigent sick with operating room allowances of $20 for major surgery and $10 for minor surgery, and (3) authority to permit private hospitals in counties having state-owned institutions to participate in the SHC program when the superintendent of the state-owned facility certifies that neither facilities nor equipment are available or are adequate for the care required.

The third provision would have the effect of permitting reimbursement of private hospitals in Adams, Hinds, Jones, Lauderdale, and Warren counties when charity and other hospital superintendents issue the appropriate certification. Private hospitals in the other 77 counties will continue to be fully eligible for participation.

Appearing before the meeting were representatives of the Mississippi Hospital Association and State Hospital Commission.

M.S.M.A.'s Council on Medical Service Chairman Lawrence W. Long, right, questions Mr. Jay Hedgepeth, left center, on the newly-proposed indigent care law during the recent meeting-hearing. Other participants are, from the left, Dr. M. Q. Ewing, Amory; Dr. George W. Hicks, Pascagoula; Dr. Stanley A. Hill, M.S.M.A. president, Corinth; Mr. J. D. Miller, A.M.A., Chicago; Mr. Reed Hogan, Clarksdale; Mr. Hedgepeth; Mr. Charles W. Flynn, Jackson; Mr. W. K. Anderson, Clarkdale; Mrs. Kitty Kennedy, council recorder; Mr. D. A. Lingle, Laurel; Dr. W. E. Lotterhos, Jackson; Rowland B. Kennedy, M.S.M.A. executive secretary; and Dr. Long. Missed by the camera are Drs. S. Lamar Bailey, Kosciusko; G. Swink Hicks, Natchez; Guy T. Vise, Meridian; T. E. Ross, Hattiesburg; and Everett H. Crawford, Tylertown.

New Members

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association since November 24, 1959:

ARRINGTON, MYRON LAMAR, Prentiss. Born Crystal Springs, Mississippi, September 16, 1930; M.D., Tulane University, New Orleans, 1955; interned Charity Hospital, New Orleans, Louisiana; residencies at School of Aviation Medicine, Randolph AFB, San Antonio, Texas, two months, and Huey P. Long Charity Hospital, Pineville, Louisiana, one year; U. S. Air Force 1956-1958; elected December 10, by South Mississippi Medical Society.

BRYANT, KIRBY KNAPP, JR., Mantachie. Born Plainfield, New Jersey, February 4, 1940; M.D., Harvard Medical School, Boston, 1956; interned University of Texas Medical Branch Hospitals, Galveston, Texas; military service 1957-1959; elected December 8, by Northeast Mississippi Medical Society.

"If anyone pays their bill while I'm gone, tell them thanks and that theirs was the worst case I ever treated."

DOWNARD, JOE THOMAS, Laurel. Born Jackson, Mississippi, August 8, 1927; M.D., University of Mississippi, Jackson; interned Confederate Memorial Medical Center, Shreveport, Louisiana; U. S. Navy 1945-1946; elected December 10, by South Mississippi Medical Society.

EURE, WILLIAM RUPERT, Bay Springs. Born Hattiesburg, Mississippi, October 19, 1930; M.D., University of Mississippi, Jackson, 1958; interned University of Mississippi Teaching Hospital, Jackson, Mississippi; U. S. Air Force, 1951-53; elected December 10, by South Mississippi Medical Society.

FORTENBERRY, JERRY A., Columbia. Born Jackson, Mississippi, February 7, 1928; M.D., Tulane University, New Orleans, 1953; interned U. S. Naval Hospital, Bethesda, Maryland; elected December 10, by South Mississippi Medical Society.

GAVIGAN, ARTHUR JOHN, Gulfport. Born Peabody, Massachusetts, October 29, 1904; M.D., Yale University, New Haven, 1931; interned Long Island Hospital, New York; psychiatry residency, Yale University, two years; electroencephalography residency, Hines V. A. Hospital, Chicago, Illinois, four years; Lt. Col., U. S. Army, four years; federal medical officer in V. A. service, eleven years; diplomate, American Board of Psychiatry 1937; elected November 4, by Coast Counties Medical Society.

KEADY, DWIGHT S., Vicksburg. Born Wakeeney, Texas, November 22, 1932; M.D., Tulane University, New Orleans, 1956; interned St. Joseph's Hospital, Fort Worth, Texas; recently released from military service and now serving a residency at Kuhn Memorial State Hospital, Vicksburg; elected October 13, by West Mississippi Medical Society.

KITCHINGS, BEN JUDSON, Long Beach. Born Forkville, Mississippi, December 31, 1930; M.D., Tulane University, New Orleans, 1955; interned Baptist Hospital, Nashville, Tennessee; Ob-Gyn residency, Baptist Hospital, Nashville, one year; U. S. Air Force 1957-1959; elected September 2, by Coast Counties Medical Society.

The average doctor in private practice sees 154 patients per week, 72.5 per cent in the office, 22 per cent in the hospital and 5.5 per cent in the home.

Bane Committee Raps 'Physician Shortage' Calling for Federal Aid

Twenty-two nationally prominent leaders in health and education, members of the so-called Bane Committee appointed by the U. S. Public Health Service, said in a report to the Surgeon General that a $1 billion federal aid program for medical school construction as well as federal medical scholarships was urgently needed. The goal set by the committee is to provide 330,000 physicians in the United States by 1975.

The report continued that a critical review of teaching methods be undertaken with a view toward making schools more effective and economical. "Unreasonably restrictive admission criteria" of medical schools was attacked in the committee's findings.

PHYSICIAN RATIO

Basing major contentions on the physician-population ratio, a controversial measure of physician supply, the Bane group said that there was a steady decline in the number of physicians-per-100,000 persons in the nation. To maintain a minimum number of doctors necessary, as many as 24 new medical schools should be organized, the report continued.

Reacting to the report, the Association of American Medical Colleges was quoted as stating its complete accord with the committee's recommendations. AAMC added that medical schools should receive a larger portion of Hill-Burton hospital construction funds at the federal level. Other measures of federal aid sought by the schools' organization included federal funds for full overhead support of government-sponsored research projects.

NEW SCHOOLS URGED

The Bane Committee said that seven states should initiate action to organize new medical schools. These are Florida, Indiana, Michigan, New Jersey, Ohio, Texas, and Washington. Nine states, the report said, need more doctors but probably couldn't afford to organize new schools. They are Arizona, Idaho, Maine, Montana, Nevada, New Hampshire, New Mexico, Rhode Island, and Wyoming.

NUGGETS FROM GOLDWATER

At bottom, and with all the trappings of modern times stripped away, the real crisis of our times is in the thoughts and the actions of men. Men, not conditions, are responsible for our progress or our decay.

Oppression by a majority (is) at least as bad if not worse than oppression by a minority. In Lord Action's maxim, none is excepted from the rule that "power corrupts and absolute power corrupts absolutely."

In the last 30 years, the federal authority has been extended and enlarged far beyond the limits originally set in the Constitution. Today, it either preempts or strongly encroaches upon the powers of state and local bodies and covers almost every interest formerly of private concern.

Let me ask you a question: How much federal aid did our forefathers receive? What they did, they did with their own abilities; what they provided in the way of schools and roads and hospitals, they did with their own savings or taxes at the local level. What they had was character; all they did was work; all they wanted was self respect.

—Senator Barry Goldwater, "Men and Good Government," address, April 30, 1959, at Washington

Explaining the report to AAMC, U. S. Surgeon General Leroy E. Burney said that the medical educators ". . . will have to take their story to the American public if they expect to get help in a federal aid program." He placed emphasis on ". . . high cost of medical education," stating that 40 per cent of all medical students came from 8 per cent of American families from an economic viewpoint.

The Mississippi State Medical Association has taken the position that the State Medical Education Board program of rural medical scholarships should be abolished as such, leaving only a restricted number of scholarships available for Mississippians as opposed to the present program. Although official policy comment has not been made in connection with the Bane report, several M.S.M.A. officials have affirmed that there is no shortage of physicians in the state.

Component Medical Society Officers Conference

A special meeting of key component medical society officers has been called by Dr. Stanley A. Hill, Corinth, M.S.M.A. president, at Jackson on February 4. The conclave will be conducted in the Victory Foyer, Hotel Heidelberg, beginning at 1:30 p.m.

Dr. Hill said that the purpose of the meeting is ". . . to offer a forum for discussion of local problems, membership procedures and goals, building more effective liaison between local societies and the state association, and pertinent legislation—both state and national."

While initial calls were addressed to component society presidents and secretaries, Dr. Hill emphasized that other local officers are urged to attend as their interests and organizational duties indicate. He made special reference to vice presidents, delegates to M.S.M.A., key committee chairmen, and those concerned with special local projects.

An informal reception has been scheduled in the Silver Room immediately following adjournment of the meeting. All conferees are invited to attend. Dr. Hill said that M.S.M.A. general officers and members of the Board of Trustees will be present.

DEATHS

DUNAVANT, ANDREW POINDEXTER, Pontotoc; M.D., Memphis Hospital Medical College, Memphis, 1910; postgraduate work, Tulane University, New Orleans; died December 22, aged 70.

GILLESPIE, GEORGE YANCEY, JR., Greenwood; M.D., University of Virginia, Charlottesville, 1915; interned Bryn Mawr Hospital, Bryn Mawr, Pennsylvania; residency, same hospital, one year; postgraduate work, Tulane University, New Orleans; served as Lieutenant in World War I; died December 12, aged 68.

PHILPOT, VAN BUREN, Memphis, Tennessee; M.D., Memphis Hospital Medical College, Memphis, 1912; interned Vicksburg Charity Hospital, Vicksburg, Mississippi; postgraduate courses at Tulane University, Columbia University, New York Polyclinic, Harvard, and Cook County Hospital; founder and first editor of the *Mississippi Doctor;* Fellow, American College of Surgeons; served as president of Northeast Mississippi Medical Society, Mid-South Postgraduate Medical Assembly, Mississippi Chapter of the American College of Surgeons, Mississippi Hospital Association, and three times as Chairman, M.S.M.A. Section on Surgery; was superintendent and surgeon in charge of the Houston Hospital, Houston, Mississippi, for 27 years, and North Mississippi Hospital, Holly Springs, Mississippi, for 10 years; author of numerous published essays on abdominal, gynecological, and traumatic surgery; pioneer in making medical motion pictures; served in many important appointed capacities in M.S.M.A., including committees concerned with nursing education; relocated in Memphis in 1957; Emeritus member of the association and member, M.S.M.A. House of Delegates; died at Baptist Hospital, Memphis, Tennessee, December 14, aged 71.

SUTHERLAND, WADE HAMPTON, Booneville; M.D., Memphis Hospital Medical College, Memphis, 1904; devoted two months of each year to study of diagnosis, surgery, and hospital management; having studied at Johns Hopkins, Mayo Clinic, and the University of Edinburgh; died at Northeast Mississippi Hospital, December 16, aged 83.

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To be effective, a diet must be *eaten* by the patient. The majority of housewives prefer Wesson particularly by the criteria of odor, flavor (blandness), and lightness of color. (Substantiated by sales leadership for 59 years and reconfirmed by recent tests against next leading brand with identification removed, among a national probability sample).

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FREE *Wesson recipes, available in quantity for your patients, show how to prepare meats, seafoods, vegetables, salads and desserts with poly-unsaturated vegetable oil. Write—specifying quantity needed—to The Wesson People, 210 Baronne St., New Orleans. La.*

The diet prescribed to lower cholesterol can include a breakfast egg cooked in poly-unsaturated Wesson.

Training Institutions Protest Foreign Grad Exam Deadline

Alien physicians in the United States, all foreign trained, may simultaneously become less of a headache in medical licensure and more of a problem in hospital training programs this year. Crux of the paradox is a certification deadline imposed by the Educational Council for Foreign Medical Graduates.

The ECFMG program, jointly sponsored by A.M.A., American Hospital Association, Federation of State Medical Boards, and Association of American Medical Colleges, was initiated in 1957 to examine immigrant physicians in academic achievement, English language facility, and over-all professional attainment. The July 1, 1960, certification deadline is the last roundup for those in the U. S. to qualify for appointment in accredited internship and residency programs.

A.M.A.'s Council on Medical Education and Hospitals says that just half of the 8,350 foreigners now in hospital training have ECFMG qualification. Examination of the remainder poses serious problems giving rise to vigorous opposition in many professional quarters.

Although the July 1 deadline was reaffirmed by A.M.A.'s House of Delegates at Dallas last December, it has been a target for bitter attack by some training institutions. Spokesmen for hospitals say the cutoff date will seriously curtail if not destroy their intern and resident training programs. Both proponents of the qualification deadline and ECFMG sponsor-organizations remain firm in asserting that fair advance notice was given.

The Hearst Corporation's *New Medical Mate-*

ria, controlled circulation publication, says that nearly 14,000 alien physicians have immigrated to the United States since 1949. From 1,000 to 1,900 have entered the country every year except 1953. Since then, admission and immigration trend has increased steadily with just under 2,000 foreign physicians coming in during 1957 and 1958. Of all immigrants admitted, the percentage of physicians has jumped from 5.7 during 1949-59 to more than 7.6 at the present.

A.M.A. reports that half the interns and residents in New York City are graduates of foreign medical schools and another report said that 65 per cent of house staff positions in New Jersey are similarly filled. From over-all state viewpoints, problem is most critical in New York, Illinois, and Ohio where foreigners constitute 30 per cent of hospital trainees.

New York and American Stock Exchange figures on 13 selected pharmaceuticals reflect upward trends in year-end-1959 bid and ask prices as booming sales pushed values up as much as double a year ago. Dividend yield was low with all but one corporation paying less than 3 per cent despite sales increases ranging up to a third over the preceding year.

Research spending by companies studied showed outlays up to 10 per cent of gross sales. Intensity of investigation activities was reflected in corporate earnings per share for 1959, a result of new product marketing in most cases. Of the 13 firms studied, all but two were specialty houses. The two general line organizations were among the big gainers with sales up 10 per cent and 21 per cent, respectively.

—Data from *New Medical Materia*

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the "full-range" oral hypoglycemic agent... lowers blood sugar in mild, moderate, and severe diabetes, in children and adults

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no clinical toxicity in over 3000 patients studied closely for varying periods up to nearly three years.

On a "start-low-go-slow" dosage pattern, DBI is relatively well tolerated. Gastrointestinal reactions occur most frequently in dosages exceeding the practical maximum 150 mg. daily, but abate promptly upon reduction of dosage or withdrawal of DBI.

The physician prescribing DBI should be thoroughly familiar with its indications, dosage, possible side effects, precautions and contraindications, etc.

DBI (N^1-β-phenethylbiguanide HCl) is available as white, scored tablets of 25 mg. each, bottle of 100.

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DONNAGEL: In each 30 cc. (1 fl. oz.):

Kaolin (90 gr.)	5.0 Gm.
Pectin (2 gr.)	142.8 mg.
Hyoscyamine sulfate	0.1037 mg.
Atropine sulfate	0.0194 mg.
Hyoscine hydrobromide	0.0065 mg.
Phenobarbital (¼ gr.)	16.2 mg.

DONNAGEL WITH NEOMYCIN

Same formula, plus

Neomycin sulfate	300 mg.

(Equal to neomycin base, 210 mg.)

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Tetracycline Phosphate Complex (TETREX®) in the Therapy of PNEUMONIA

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Preferably, antibiotic therapy should be based on pretreatment culture of the offending pathogen, but in bacterial pneumonia the problem may well be too pressing to permit the required delay of 24 to 48 hours. A differential diagnosis among bacterial pneumonias, based on such clinical grounds as speed of onset, sepsis and pain may guide the choice of antibiotic for initiation of therapy.

Should clinical judgment dictate that antibiotic therapy be started immediately, at the same time a sputum sample or a subglottic swab can be sent to the laboratory for culture and sensitivity studies. If the response to the first antimicrobial agent proves unsatisfactory, a reasonable basis for changing therapy will then be at hand.

Choosing the Antibiotic

Since therapy must be started at once for bacterial pneumonia, it is advisable to choose a broad-spectrum antibiotic that quickly produces high levels of active agent (e.g., tetracycline phosphate complex, TETREX). Such an antibiotic probably has the best chance of controlling the pathogen, whether it be gram-negative or gram-positive. And if the laboratory report shows that the invading organism is much less sensitive to tetracycline than to other agents, the patient can then be changed to an appropriate antibiotic. If the difference in sensitivity is slight, then the possibility of side effects, sensitization, and toxicity should be evaluated before changing therapy to another antibiotic.

The greatest number of bacterial pneumonias are caused by pneumococci, which respond very well to penicillin, tetracycline, and chloramphenicol. Also, these antibiotics are usually effective against the other gram-positive coccal pneumonias. But penicillin is ineffective against the viral pneumonias and the gram-negative *Hemophilus influenzae* and *Klebsiella pneumoniae*. Although *K. pneumoniae* causes only about 1 to 2 per cent of pneumonia cases on the average,[1] these are apt to be acute and fulminating (Friedländer's pneumonia), with a high mortality rate if not effectively treated. Since pneumococcal pneumonia may be difficult to distinguish clinically from Friedländer's, except by gram-stained sputum smear, it may be wiser to start treatment with an agent also effective against Klebsiella.

Penicillin, however, in addition to having a limited spectrum, also causes many minor and some serious sensitivity reactions. In a recent survey[2] it was found that penicillin produced severe skin reaction. But most important was the observation that anaphylactic shock, with a fatality rate of about 9 per cent, was the most frequent serious reaction. Such severe reactions are almost always associated with parenteral administration.

Tetracycline is also clinically effective in primary atypical pneumonia.[3]

The tetracyclines (e.g., TETREX) have the advantage of a broad range of antimicrobial activity and low toxicity. And in addition, the physician does not have to trouble himself or his patients with repeated blood studies when he prescribes TETREX. Minor reactions such as gastric upsets or mild skin rashes occur occasionally. The most serious side effects are staphylococcal and monilial overgrowth, but these are rare and can be adequately controlled.

No one would deny that appropriate antibiotic therapy has greatly reduced morbidity and saved many lives of patients with bacterial pneumonia. Nevertheless, general supportive measures in the care of patients remain important even today. Especially in the desperately ill patient, antibiotics are not considered as substitutes for the individual evaluation, clinical observation and judgment of the physician.

Some Micro-organisms Susceptible[a] to Tetracycline (TETREX)[b]

Streptococcus; Staphylococcus; Pneumococcus; Gonococcus; Meningococcus; *C. diphtheriae; B. anthracis; E. coli;* Proteus; *A. aerogenes; Ps. aeruginosa; K. pneumoniae;* Shigella; Brucella; *P. tularensis; H. influenzae; T. pallidum;* Rickettsiae; Viruses of psittacosis and ornithosis, lymphogranuloma inguinale, primary atypical pneumonia; *E. histolytica; D. granulomatosis.*

a Some strains are not susceptible.

b Table adapted from Goodman, L. S., and Gilman, A.: The Pharmaceutical Basis of Therapeutics. 2nd edition, New York, The Macmillan Co., 1956, pp. 1322-1323.

References: 1. Wood, W. E., Jr.: In: A Textbook of Medicine. Edited by Cecil, R. L., and Loeb, R. F., 9th edition, Philadelphia, W. B. Saunders Co., 1955, p. 145. 2. Welch, H.; Lewis, C. H.; Weinstein, H. I., and Boeckman, B. B.: Severe reactions to antibiotics. A nationwide survey. Antibiotic Med. & Clin. Ther. 4:800 (Dec.) 1957. 3. Keefer, C. S.: The choice of an anti-infective agent. In: Drugs of Choice, 1958-1959. Edited by Walter Modell, St. Louis, The C. V. Mosby Co., 1958, p. 135.

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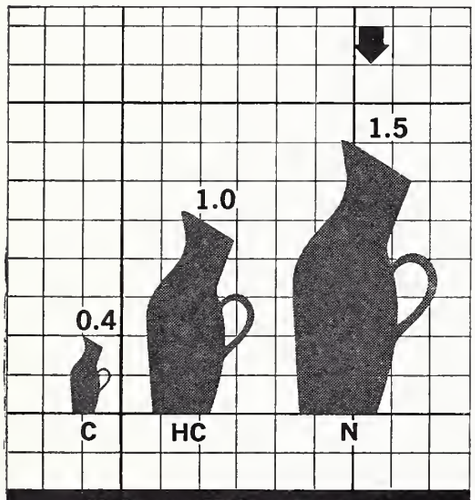
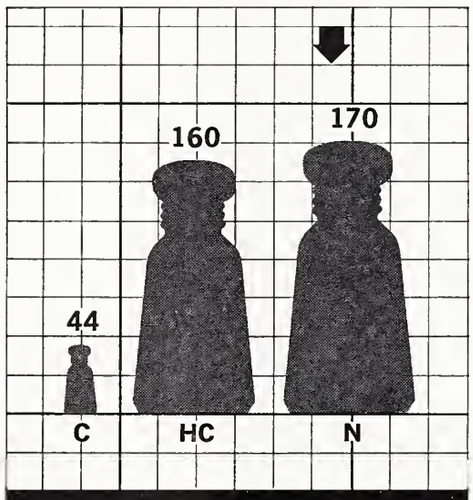
"When compared to other members of this heterocyclic group of compounds, this drug [NATURETIN] shows a significantly increased natriuresis and decreased loss of potassium and bicarbonate. In this respect it more closely approaches a natural or 'ideal diuretic.' It is effective upon continuous administration and causes no significant serum biochemical changes. It is effective in a wide variety of edematous and hypertensive states and represents a significant advance in diuretic therapy." *Ford, R.V.: Pharmacological observations on a more potent benzothiadiazine diuretic; accepted for publication by the American Heart Journal.*

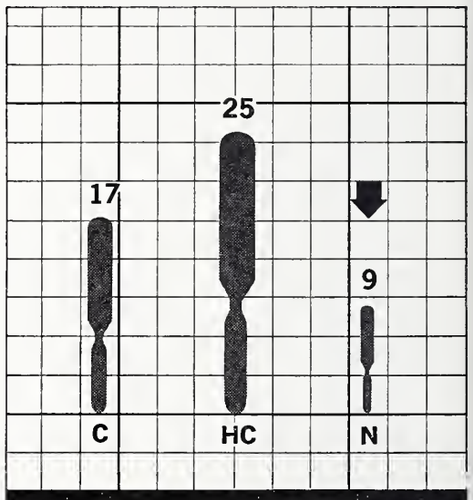
Comparison of electrolyte excretion pattern for the 24 hours following typical doses of chlorothiazide, hydrochlorothiazide, and Naturetin[1]



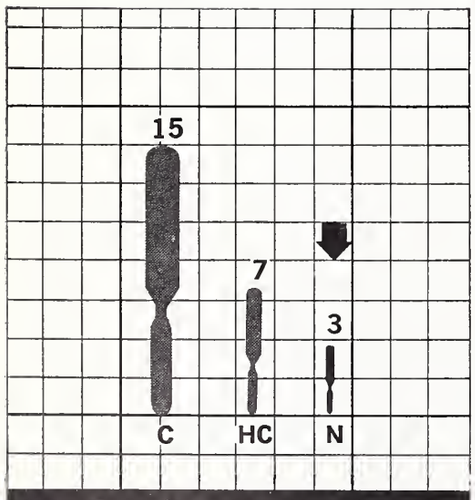
Urinary Volume (liters)
significantly increased with Naturetin



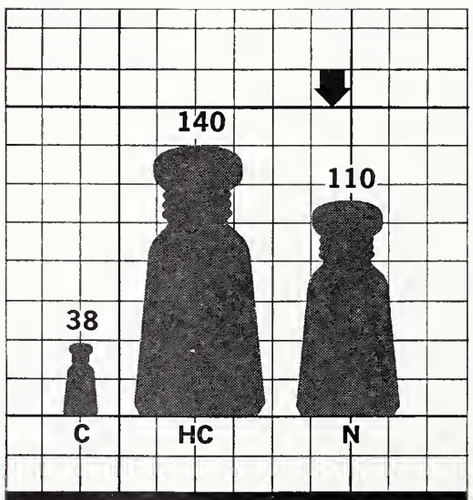
Natriuresis (mEq./24 hr.)
sodium excretion significantly increased with Naturetin



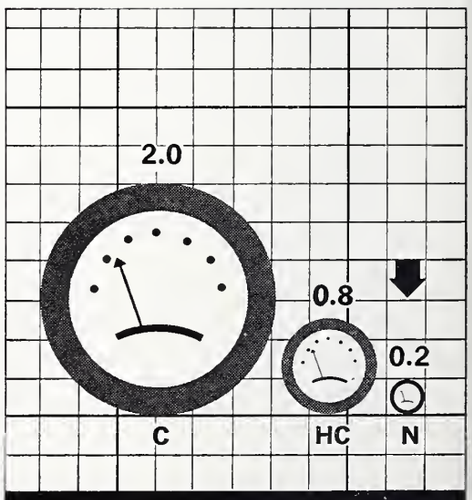
Potassium Excretion
(mEq./24 hr.)
least with Naturetin



Bicarbonate Excretion
(mEq./24 hr.)
least with Naturetin



Chloride Excretion
(mEq./24 hr.)
marked increases



Urinary pH
least increase with Naturetin

Typical Doses: Chlorothiazide—1,000 mg.; Hydrochlorothiazide—50 mg.; Naturetin (Benzydroflumethiazide)—5 mg.

1. Adapted from: Ford, R. V., Squibb Clin. Res. Notes 2:1 (Dec.) 1959.

Volume I
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March 1960

JOURNAL of the Mississippi STATE MEDICAL ASSOCIATION

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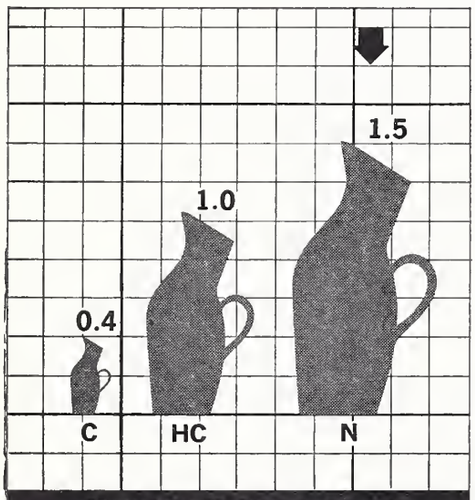
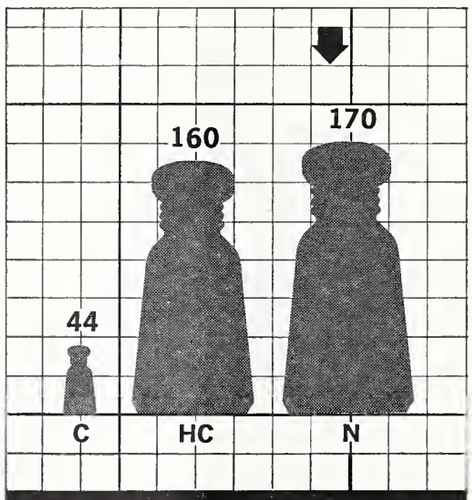
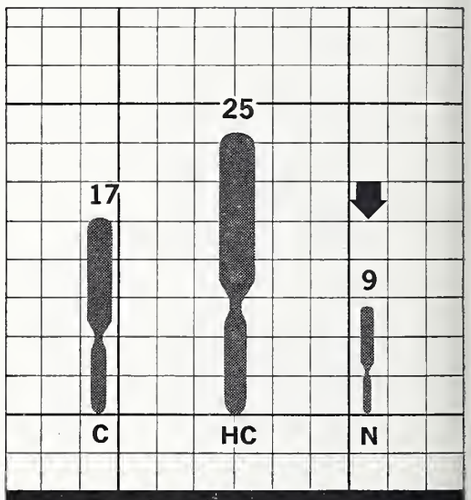


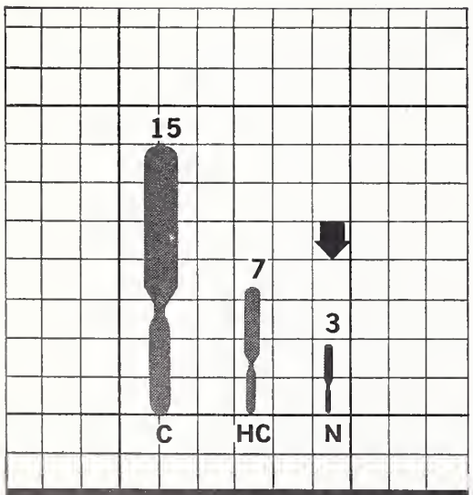
Urinary Volume (liters) significantly increased with Naturetin



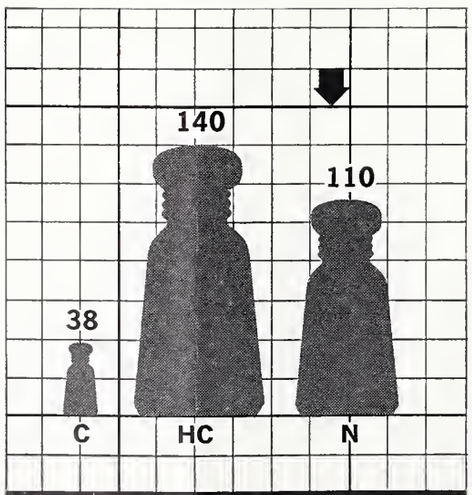
Natriuresis (mEq./24 hr.) sodium excretion significantly increased with Naturetin



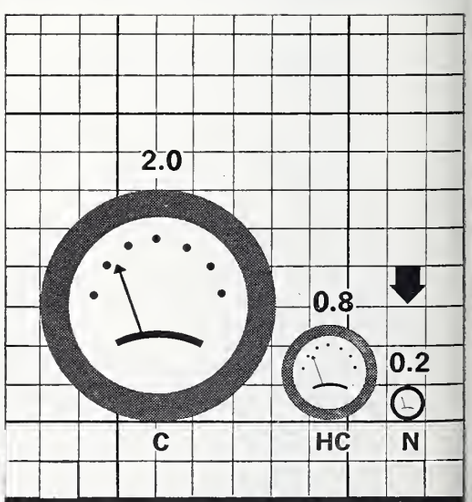
Potassium Excretion (mEq./24 hr.) least with Naturetin



Bicarbonate Excretion (mEq./24 hr.) least with Naturetin



Chloride Excretion (mEq./24 hr.) marked increases



Urinary pH least increase with Naturetin

Typical Doses: Chlorothiazide—1,000 mg.; Hydrochlorothiazide—50 mg.; Naturetin (Benzydroflumethiazide)—5 mg.

1. Adapted from: Ford, R. V., Squibb Clin. Res. Notes 2:1 (Dec.) 1959.

NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

March 1960

Dear Doctor:

Governor Ross Barnett will be a featured speaker during the 1960 AMA Miami meeting coming up June 13-17. The chief executive will address the Conference of Presidents and Other Officers of State Medical Associations June 12.

Other headliners sharing the rostrum will be major political heads and a controversial union president. They are Paul Butler and Thruston Morton, national chairmen of the Democrat and Republican parties, and David J. MacDonald, president of United Steelworkers.

Tax experts offer a minor but timely note of warning applying to every Mississippi physician. Telephone company refunds on the court-disallowed rate increase should be reported as income together with interest received. No reporting necessary on refund payments for non-professional telephones for which deduction wasn't claimed.

The mayor of Tulsa, Oklahoma, running for reelection, injected a medical note in the political race. With both city elections and a blood donor campaign in progress, the party posters show Mayor James Maxwell giving blood with the catchline, "Vote for Maxwell - good to the last drop."

Two Mississippi physicians are among the top 1960-61 officers of the Mid-South Postgraduate Medical Assembly which met at Memphis February 9-12. New president is Dr. Omar Simmons, Newton, and Dr. Thomas G. Ross, Jackson, is vice president. Secretary-treasurer is Dr. Lowry H. McDaniel, Tyronza, Arkansas.

Deadline for payment of 1960 MSMA dues is April 1 after which a $5 reinstatement fee will be assessed. House of Delegates set additional fee to offset extra administrative costs involved in reinstating delinquent members. All dues should be paid to local society secretary.

Sincerely,

Rowland B. Kennedy
Executive Secretary

Heavy Workmen's Compensation Agenda Before Legislature

Jackson - Almost a dozen bills pertaining to Mississippi's workmen's compensation program are before the regular session of the Legislature. A "package" of eight companion bills, sponsored by Mississippi Economic Council and Mississippi Manufacturers Association, seeks clarification in law and sets out some definitions not previously covered. MSMA feels bills do not go far enough in clarification and definition. Another measure, H.B. 144, seeks a fee schedule for compensation care based on VA hometown fees against which MSMA testified last month.

AMA Launches Major Study On Care Costs

Chicago - A newly organized Commission on the Cost of Medical Care under AMA sponsorship will examine every phase of medical care where cost or spending is involved. Dr. Louis M. Orr, AMA president, said a $100,000 grant will finance initial commission studies which may serve as a "...little Hoover commission" on professional fees, hospital charges, nursing costs, drug expenditures, and health insurance premiums. Commission members will be announced soon.

New Federal Care Bill Dwarfs Forand Proposal

Washington - Senator John F. Kennedy (D., Mass.) tossed a new federal health care bill in the hopper which would encompass all Social Security beneficiaries in paying for hospital, nursing home, and even outpatient diagnostic services. Co-sponsor is Senator Phillip Hart (D., Mich.). The measure duplicates the Forand bill in tax increases and government control over providers of care but omits surgical services. Kennedy said on Senate floor that there wasn't "...any question about the need for this legislation."

AMA Meeting Film Available To Local Groups

Chicago - Newest print in the "Medifilm Report" series is a narrative documentary of the recent AMA Dallas Clinical Session. The 25-minute, 16mm sound movie shows meeting overview including excerpts from top essays, exhibit scenes, and House of Delegates. Available from AMA Film Library, 535 N. Dearborn St., Chicago 10, Illinois.

Forand Bill Said 'Most Popular Issue' Before Congress

New York - Cowles Magazine's "Insiders Newsletter" says the Forand bill is the most popular issue before the second session of the 86th Congress, based on a spot check of representatives' and senators' mail. The usually authoritative publication said that although Eisenhower opposes measure, the White House might come up with its own version which would be "much milder." Most observers look for administration to sponsor another reinsurance proposal where federal government would guarantee solvency of health plans.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
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ORIGINAL PAPERS

Virus Infections and Human Disease Past, Present, and Future

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New Orleans, Louisiana

The epidemiologic approach in virology is discussed. Since epidemiology is principally concerned with elucidating the causes of human disease, the author attacks chiefly the problem of relating specific viral infections of man to disease in man. This involves not only demonstrating that a virus is the primary etiologic agent but also demonstrating the important factors which influence the occurrence of human infection and those which, in individual instances, may determine that infection shall result in disease.

As the title suggests, a somewhat chronologic approach is used in describing past and present problems and in speculating as to the future. Important threads followed are the developing knowledge of the nature and properties of viruses, the rapidly evolving technical ability to recognize viruses and viral infections, changes in the recognized patterns of occurrence of long established viral diseases, the phenomenon of emergence of new diseases and of a host of new viral agents, and the growing interest in the possible relation of viruses to cancer.

WELL BEFORE PASTEUR, certain basic principles relating to infection were established in relation to diseases now known to be of viral origin. Specific infection was demonstrated for measles in 1758 by transferring acute phase blood and for rabies in the early nineteenth century by determining the infective role of canine saliva. Specific immunity as well as infection was recognized for smallpox in the ancient practice of variolation and brought to a practical stage in 1798 by the work of Jenner. Nonetheless, as the era of microbiology opened, the development of virology lagged far behind that of bacteriology for obvious reasons. Invisible because of their usual sub-microscopic size and not cultivatable in synthetic media because of their status as obligate intracellular parasites, the very existance of viruses had to be inferred from their observable effects in animals and man. The term virus (Latin for poison) was introduced by Pasteur to refer to the microbial but submicroscopic agent he postulated as the cause of rabies.

In this period, bacterial agents were being discovered in and around man in increasing abundance. The resulting confusion as to the etiologic significance of these newly isolated agents, many of them saprophytes, led Koch to propose the rigorous criteria now known as Koch's Postulates, which must be satisfied before concluding that an infectious agent is the primary cause of a specific disease. These are: (1) The agent must be as-

From the Division of Graduate Public Health, Tulane University School of Medicine.
Read before the Section on Preventive Medicine, 91st Annual Session, Mississippi State Medical Association. Biloxi, May 12-14, 1959.

sociated with all cases of the disease and in logical pathological relationship to the disease, its symptoms, and lesions. (2) It must be isolated from patients in pure culture. (3) Such pure culture, when inoculated into suspectible animals or man, must induce the disease. (4) It must be recovered in pure culture from such experimental infections.[1]

The inability to cultivate viruses "in pure culture" in bacteriologic media and their invisibility posed immediate problems in establishing viruses as etiologic agents. For a few diseases the first postulate could be met in part by microscopic examinations which revealed characteristic inclusions such as Negri bodies in rabies, or the actual elementary bodies of such atypically large viruses as variola. For these and other diseases, the remaining postulates could be satisfied in some measure only if a susceptible experimental host (animal or man) could be found. In such case, transfer of human material to the experimental host with resultant appropriate disease followed by extended serial transfer in that host with resulting characteristic disease could be construed to satisfy postulates 2, 3, and 4, provided that concurrent transfer of bacterial agents could be excluded—usually by filtration and culture.

Rabies, vaccinia and variola, measles and poliomyelitis on the basis of experimental infections in animals, and yellow fever and the common cold on the basis of human volunteer work, were among the few diseases first established as of viral etiology. In the case of certain other fairly common diseases, such as chicken pox, rubella, mumps, and influenza, viral etiology was assumed because of the obvious infectious nature of the disease and the inability to incriminate consistently any specific bacterial agents.

During this early period, which might be terminated arbitrarily about 1925, at least three important diseases underwent a marked change in pattern of occurrence. Poliomyelitis emerged from a sporadic, infrequent disease to one of epidemic proportions in temperate zone areas, culminating in the 1916 epidemic in the United States. Influenza renewed its activity, reaching a peak in the pandemic of 1918-19. In Japan an important arthopod-borne (arbor) virus disease, Japanese B encephalitis, was recognized as a distinct clinical entity in 1924 when an epidemic of some 6,000 cases, many of them fatal, took place.

THE MIDDLE PERIOD—1925-1950

Only in the second quarter of the 20th century did virology begin to come of age. The susceptibilities of a wide variety of experimental animals, ranging from chimpanzees to the highly versatile laboratory mouse, were explored. Depending on age and route of inoculation, the mouse has proved susceptible to a wide range of enteric and arbor viruses including yellow fever, to various neurotropic viruses, and to influenza and ornithosis.

A major new tool for viral propagation, first exploited by Goodpasture,[2] was the developing chick embryo which proved susceptible to an extremely wide range of viruses and rickettsiae. Finally, true *in vitro* propagation of viruses in cultures of a variety of tissues was initiated in 1925 when Parker and Nye[3] cultivated vaccinia in rabbit testicular tissue. Although such relatively crude cultures served for the propagation of many mammalian viruses, they usually constituted only an alternate method for producing viral antigens. Since no virus effect was observable in the cultures, viral assay still had to be done in animals.

NEW ABILITIES—NEW STUDIES

The ability to produce experimental infections and to propagate viruses in quantity opened up many new possibilities. These included studies of pathogenesis, the production of both living and killed vaccines, the development of diagnostic procedures based on viral isolation and serologic tests and, finally, fundamental studies of the nature of viruses. Preparation of relatively purified concentrates permitted studies of chemical composition and, with the advent of the electron microscope, of the morphologic features of viral bodies.

Epidemiologically, the most important of these advances were those that facilitated isolation and identification of viruses and that permitted the specific detection of antibody. Use of these new tools led to new understanding of the epidemiology of certain well established diseases, to the recognition and epidemiologic description of certain newly emerging diseases, to the development of important control measures, and, finally, to the exploration of certain reservoirs of agents of potential future importance to man. To illustrate these points, yellow fever, influenza, and St. Louis encephalitis may serve as examples.

The work of Stokes, Bauer and Hudson[4] in West Africa in 1928 re-established the viral etiology of yellow fever and demonstrated the susceptibility of rhesus monkeys to experimental infection. Very shortly, Theiler[5] demonstrated the susceptibility of the laboratory mouse, thereby providing a cheap and convenient host for both viral isolations and demonstration of neutralizing antibodies. The stage thus was set for a major advance.

Until 1928, the hypothesis of a man-*Aedes egypti* cycle, suggested by Carlos Finlay and confirmed by the Reed Commission, had served to explain the observed occurrence of yellow fever. A corollary of this hypothesis was the "Key Center" theory, which held that yellow fever virus could persist only in urban areas of a certain minimum size. As a further corollary, mosquito control in all such areas should eradicate the agent from the Americas. By 1926 it appeared that this job had been done. Then in 1928-29, a new and severe epidemic of mysterious origin occurred in Rio de Janeiro.

Using the newly available methods of serology and virus isolation, coupled with a fantastic system for securing histopathologic studies of liver fragments from persons dying of febrile illness in all parts of Brazil, it soon became apparent that human infections were occurring in many parts of Brazil devoid of *Aedes egypti* mosquitoes. Parallel sero-surveys in Africa revealed a similar phenomenon. In both, the evidence pointed to viral persistence in certain forested areas and the term jungle yellow fever was coined. Painstaking laboratory and field work indicated that the essential ingredients of the forest cycle were certain arboreal mosquitoes and various arboreal primates. Huge areas of central Africa and of South America were shown to be continuing reservoirs of virus which at any time could be carried to urban areas and, if *Aedes egypti* were present, set off a new urban outbreak.

While no attack on the reservoir is feasible, effective control measures could be devised as the infected areas became well delineated. For inhabitants of such areas, the 17D strain, live virus vaccine became available. For threatened urban areas, *Aedes egypti* eradication was achieved. And for international control, disinsectization of planes and vessels and compulsory vaccination were invoked.

INFLUENZA VIRUS

Although influenza had long been considered an entity of presumably viral etiology, it was not until 1933 that Smith, Andrews, and Laidlaw[6] isolated the virus in ferrets. Shortly, infection of mouse and the chick embryo were shown feasible, the virus was propagated in tissue culture, and serologic work became possible. By 1940 a second viral type, B, had been recognized, and in 1949 a third type, C, was isolated.

In 1941, Hirst described an extremely important property of influenza viruses, the ability to cause agglutination of certain red cells.[7] Inhibition of this hemagglutination by antiserum provided an extremely sensitive and convenient serologic method. Using this and other serologic methods, it was soon recognized that within the Types A and B marked antigenic variation between strains existed. This was particularly true in respect to type A in which a pattern of progressive change appeared to unfold, with major changes evident in 1934, 1946, and 1957 when the Asian strains were first recognized.

ASIAN VARIANT

The phenomenon suggested—and now demonstrated in the laboratory—is an unusual antigenic lability on the part of influenza virus, motivated by the usual necessity of the virus to infect and persist in immune populations. This phenomenon is of major epidemiologic significance. Not only may it help to account for the relatively transient nature of post-infection immunity, but it also complicates the problem of control based on vaccination since, obviously, the vaccine must be derived from strains antigenically similar to those currently circulating. While the WHO influenza centers scattered about the world quickly recognized the new Asian variant, it had spread tremendously before compatible vaccine was in large scale production and use.

The phenomenon of the emergence of new diseases is a continually intriguing one and in the individual instance may pose problems of interpretation. Poliomyelitis is an example of a disease of long association with man which emerged rather abruptly from a state of infrequent occurrence to one of epidemic proportions. This emergence apparently resulted from a shift in environmental factors which delayed average infection to ages at which disease is more likely to result. Influenza illustrates simple emergence from the welter of heretofore unidentifiable disease by virtue of the recognition and identification of the etiologic agent. Finally, there is the most interesting phenomenon of the emergence of diseases truly new to man.

One of these appears to be St. Louis encephalitis which apparently first occurred as a limited outbreak in Paris, Illinois, in the summer of 1932. In the following year extensive outbreaks occurred in and about St. Louis and Kansas City, Missouri. Using monkeys and mice, the causal agent was isolated from fatal cases and characterized, and methods for virus isolation and for serology were developed. These eventually permitted extensive field studies similar to the South American and African studies of yellow fever.

The epidemiologic pattern which emerged is basically similar to that now accepted for several other well known arbor viral diseases, e.g. Eastern, Western, and Venezuelan equine encepha-

lomyelitis, Japanese B encephalitis, and West Nile fever. The basic cycle involves birds of numerous species and certain mosquitoes. Still not certainly defined is the overwintering mechanism. Since the mosquito vectors are indiscriminate feeders, they also carry the virus over to other vertebrate species, including horse and man.

ARTHROPOD RESERVOIR

Although the mechanism of the emergence of St. Louis encephalitis remains obscure, there is a very clear indication of the reservoir from which it came. In the course of the extensive field studies of jungle yellow fever and of the new North American encephalitides, examination of countless thousands of arthropods often resulted in the recovery not only of the viral agents sought but also of additional, heretofore unknown, viruses. That human infection with a number of these agents already had occurred was indicated by detection of antibody in indigenous human sera. Stimulated by these adventitious findings, the Rockefeller Foundation group in 1950 initiated a systematic exploration of this vast arthropod reservoir with bases established in India, Egypt, South Africa, Trinidad, Brazil, and California.

Although we are now moving into the current period, it seems appropriate to bring this particular story roughly up to date. Approximately 70 new viral agents have now been characterized. They bear such picturesque names of geographic origin as Zika, Uganda S., Bunyamwera, Semliki Forest, Chikungunya, and Ntaya. These agents are remarkably homogeneous in terms of particle size and other properties and many fall into one or another of two antigenically related groups.

Well known members of Group A include Eastern, Western, and Venezuelan equine encephalomyelitis viruses. Dengue, yellow fever, St. Louis, Japanese B, and Russian Spring-Summer viruses constitute the best known members of Group B. Important newly emergent arbor viral disease agents include, in Group A, Mayaro virus of Trinidad and Brazil, which is associated with a severe systemic febrile disease, and in Group B, West Nile fever, Murray Valley encephalitis in Australia, the devastating hemorrhagic Kyasanur Forest disease in India, and the dengue-related, frequently fatal Philippine hemorrhagic fever.

Of pertinence are some epidemiologic implications of the antigenic relationships between members of the above mentioned groups. The frequent crossing in serologic reactions serves to complicate the interpretation of the results of serosurveys. More important, the pattern of disease occurrence may be modified.

Immunity to dengue is now believed to explain the observation that yellow fever is more lethal for Europeans than for the native populations in West Africa. Similarly, immunity to dengue among adults is thought to explain the peculiar restriction to children of Philippine hemorrhagic fever, a truly new disease as it first occurred in what must be considered, by definition, a virgin population. Finally, this broad base of antigenic relationships affords the very reasonable hope that artificial immunization with a few properly selected group B agents may provide significant protection against all important members of the group.

THE CURRENT PERIOD—1950 FORWARD

The Nobel Award of 1954 to Enders, Weller, and Robbins recognized the achievement, initially reported in 1949, which determined the direction of the most important current work in virology. Although viral propagation in tissue culture was not new, the propagation of polioviruses by Enders and his group was associated with one extremely important and not previously observed phenomenon, namely the destruction of the cells supporting the viral growth. This cytophatic effect was readily observable, both directly and indirectly, and it could be neutralized by specific antibody.

The immediate result, for polio and ultimately for many other viruses, was that expensive experimental hosts such as monkeys could be replaced with simple test-tube cultures. Such cultures were useful for virus isolation and for neutralization tests by which, using known antibody, new viral isolates could be identified or, using known prototype viruses, specific antibodies could be detected in "unknown" sera.

Tissue cultures also served as sources of abundant viral antigen for serologic tests and for vaccines, and as systems permitting productive basic studies of virus-cell relations. Extension of the method led to the isolation and better characterization of such viruses as those of measles and of varicella (now shown also to be the agent of herpes zoster), and ultimately, to the discovery of a host of viral inhabitants of the human respiratory and enteric tracts.

The first important epidemiologic application of tissue culture methods was to the study of poliomyelitis. Such studies, including our own observations of the development of natural immunity in

southern Louisiana,[8] permit a reasonably supported general hypothesis of fecal-oral spread. In underdeveloped areas indirect, typhoid-like mechanisms are important. In temperate zones personal contact is paramount with horizontal spread in the community through the child population and, once introduced, vertical spread within households to involve all non-immune and some immune members.

SOCIOECONOMIC CORRELATION

Variations in ease of spread presumably relate to neighborhood, household, and personal hygiene which, in turn, are strongly correlated with socioeconomic status. In the upper strata, paradoxically, good hygiene may delay infection to an age when disease is more apt to result. The full spectrum of the consequences of infection ranges from the usual (75 per cent) silent immunization to the unusual (only 1 in 800 estimated in Louisiana) instance of frank paralysis. It also is now evident that "non-paralytic" polio, better designated as aseptic meningitis, often is not due to polioviruses at all.

An important by-product of the intensified search for polioviruses in human feces was the discovery of many new viral agents. This actually began in 1948, prior to the use of tissue cultures, when Dalldorf and Sickles[9] reported recovery in suckling mice of a non-polio virus from two boys with paralytic disease. Agents so isolated were designated as Coxsackie viruses and have increased to 29 serotypes, 24 in Group A and five in Group B. Tissue culture methods have yielded the cytopathic members, especially Group B, with great frequency and also have revealed still another large group of enteric viruses, now totalling at least 24, referred to as ECHO (enteric cytopathic human orphan) viruses.

The logical extension of these methods to the respiratory tract has been almost equally productive. The newly recognized, antigenically related Adenoviruses now number 18. To these must be added salivary gland virus, the JH and 2060 strains, and four new myxoviruses (Sendai, CA or croup-associated, and hemadsorption viruses 1 and 2).

Etiologic relationships have been acceptably established for certain of these new viruses on the basis of constant association with well defined clinical manifestations, especially in epidemic outbreaks. Coxsackie Group A agents may cause herpangina, aseptic meningitis, and, reported from Russia, paralytic disease. Group B agents have been incriminated in epidemic pleurodynia, aseptic meningitis, and fatal myocarditis in newborn infants. Several ECHO viruses, notably types 4, 6, 9, and 16, have caused outbreaks of aseptic meningitis and/or exanthematous disease. Among the Adenoviruses, type 8 is related to epidemic keratoconjunctivitis and types 3, 4, and 7 to febrile, influenza-like disease, especially in military populations.

However, the great frequency of recovery of many of these agents from healthy persons poses a number of problems. Heretofore, the investigator has begun with a disease and sought the agent. Now, many agents are known for which the related diseases, if any, must still be discovered. Also, it is clear that simple demonstration that a a patient is infected with a virus does not provide a conclusive etiologic diagnosis.

Our own experience may illustrate these problems.[8] Our Louisiana study households, comprising 156 initially and 110 terminally, yielded evidence of 447 individual poliovirus infections in the period from mid-1953 through 1957. In this same period they also yielded in excess of 2,000 non-polio virus isolations, only about half of which have been identified to date. In peak summer months nearly 30 per cent of the observed children were excreting at least one enterovirus. Yet, only with poliovirus infections was at least some correlation with even minor illness possible.

In 1956 and 1957, we also surveyed all patients admitted to Charity Hospital with polio-like disease. Except for the true poliovirus infections, this patient group did not differ significantly in respect to the frequency of infection with any specific enterovirus from a control group of non-infections patients or—in fact—from comparable healthy segments of our household study group. Were it not for the fact that the enteroviruses recovered from the patient group usually were agents that had been incriminated etiologically in epidemic outbreaks elsewhere, our findings would have been totally devoid of diagnostic significance.

'THE VIROLOGIST'S DILEMMA'

Under the title "The Virologist's Dilemma," Huebner has dealt directly with the broad present problem of the criteria needed to establish etiologic association of a specific prevalent virus with a specific disease.[10] As the foregoing was intended to illustrate, simple temporal correlation of disease and viral isolation, while a necessary datum, does not constitute evidence of a high order for an etiologic relation.

Huebner's principal suggestions as to criteria differ somewhat, for obvious reasons, from Koch's Postulates. First, he insists that the virus be "real" in the sense that strains will stand shipping to

other laboratories and that it must derive from the human specimens under study. This latter point of caution relates to the possibility of laboratory contamination and the frequency with which viruses are detected which are native to the experimental host species inoculated or contributing its serum or tissues to the tissue culture systems employed.

Secondly, he wants assurance that the virus indeed produces active infection in man as evidenced by the post-infection development of antibody. Third, he wants evidence, based on proper characterization of the virus and comparison with known viruses, that it is truly a new agent. Fourth, with well defined clinical entities, the agent should be constantly associated. Wherever possible, it further should be associated with the disease process, e.g. recovered from the spinal fluid in aseptic meningitis. Fifth, when human volunteer studies are possible, they should be "double blind" in nature and should result in disease consistent with that occurring naturally.

EPIDEMIOLOGIC STUDIES

Sixth, and perhaps most important, are carefully conceived epidemiologic studies in the community, of cross-sectional or longitudinal nature, which may permit both temporal and spatial correlation of infection and disease. A final scientific base is the demonstration of prevention by specific vaccination.

As a final note to the present period, the tremendous increase in interest in the possible etiologic relation of viruses to cancer should be mentioned. Since 1911 when Rous described the cell-free transfer of a chicken sarcoma, numerous observations have been made, especially in recent years, of virus-induced tumors in animals. Of special interest, because of the possible analogies to human disease, are the Bittner agent of mammary carcinoma in mice, the avian leucosis complex, at least two mouse leukemia agents, and the recently described SE polyoma virus of mice.[11]

Transfer of the Bittner agent is chiefly to the suckling young via the maternal milk, the viral infection persisting in latent form until physiologic maturity. The possibility of an analogous mechanism in man is most intriguing. With the avian leucosis complex and the polyoma virus, depending on dose, route, and age at time of infection, the same agent can give rise to tumors of widely varied types. Furthermore, the polyoma virus will induce tumors in at least two species other than the mouse. For technical reasons, probably largely related to the usual host specificity of tumor viruses, there is as yet no substantial evidence of virus-caused cancers of man.

SUMMARY

In semi-chronologic and necessarily sketchy fashion the evolution of knowledge about viruses and the diseases they produce in man has been reviewed. Well before Pasteur, certain diseases, now known to be caused by viruses, provided the earliest demonstrations of specific infectivity (measles and rabies) and specific immunity (small pox). Since Pasteur and particularly since 1925, knowledge has increased in an almost logarithmic curve. Significant changes in the patterns of occurrence of such older diseases as polio and several examples of the emergence of new diseases such as St. Louis encephalitis have been seen. One by one the agents of such established clinical entities as yellow fever, polio, influenza, measles and varicella have been isolated and characterized, and major epidemiologic insights have been gained. At the same time, aided in several instances by newly developed vaccines, control and prevention have advanced.

Currently, virologists are faced with a problem very similar to that confronting bacteriologists immediately after Pasteur. With synthetic media great varieties of bacteria could be cultured from almost any source. With Koch's aid, criteria were established by which the pathogens could be related to their appropriate diseases and separated from the saprophytes. By modern methods a host of viral agents whose importance to human disease remains to be determined have been isolated from human and arthropod sources. Although, as Huebner's criteria suggest, the problem is technically more difficult, it seems certain that it is being gradually resolved. Finally, there is increasing interest in the possibility that viruses may play an important role in the causation of human cancer.

THE FUTURE

It requires but a modest degree of imagination to project the trends described into the future. Technical improvements finally will permit isolation and characterization of such heretofore reluctant agents as the viruses of hepatitis, infectious mononucleosis, and even the common cold. As the result of progressive—and not yet fully understood—changes in environmental factors, two types of change in disease occurrence may be expected to continue. Age patterns of infection with certain known and rather prevalent viruses may shift with a resulting change in the nature and frequency of disease. Mumps and rubella, for example, may become common as adult diseases with greatly increased significance. Or,

some of the newly recognized enteroviruses of apparently low present pathogenicity may repeat the polio story. The emergence of truly new diseases also may be expected to continue, not only from the already explored arthropod reservoir but also from an equally vast reservoir which must exist in lower vertebrates.

Further, the number of viruses adventitiously detected in relation to man will continue to increase, and slowly certain of these will be revealed as true pathogens, responsible in each case for some small segment of the mass of as yet undifferentiated infectious disease—respiratory illness, diarrheal disease, aseptic meningitis, and plain "fevers of unknown origin."

Finally, it seems inescapable that viruses will be related to at least certain human cancers. It is unreasonable to think that special mechanisms have been contrived only for lower vertebrates. The various forms of human leukemia, lymphatic tumors including Hodgkins disease, at least some mammary cancers, and perhaps bladder tumors provide close analogies to tumors of animals already shown to be caused by viral agents.

Going somewhat further, and based only on the inherent similarities of the whole array of malignant tumors which suggest some common denominator in their causation, it is my conviction that viruses may prove to be essential to all cancer. In some instances, it may be that only viral infection is needed. In others, it may be that other influences—chemical carcinogens or irradiation—are necessary inciting factors. ★★★

1430 Tulane Avenue

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FORAND FALLACY

Among the many fallacies, inequities, and extravagances which are proposed in the Forand bill, one is outstanding. In extending surgical and hospital services to Social Security recipients, the bill actually excludes a majority of citizens over age 65. Most seniors are not under Social Security, thus the proponents prove their interest in socialization—not people.

Modern Treatment of Nasal Fractures

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Nasal fractures, more common than any except those of the clavicle and wrist, are discussed as to manner of occurrence and diagnosis. The need for careful management is emphasized and methods of accomplishing optimum cosmetic results are considered.

The practitioner is cautioned against pitfalls commonly encountered in making accurate diagnosis, applying reduction technic, and during postoperative care. With respect to these pitfalls, accepted procedures are described and examples given.

THE MANAGEMENT OF NASAL FRACTURES still leaves much to be desired, even though they are said to be more common than any other fractures except, perhaps, those of the clavicle and wrist. This is regrettable because even small irregularities resulting from a nasal fracture seem glaring due to the prominence of the nose on the face. In particularly sensitive individuals such irregularities may lead to the development of personality problems. Additionally, symptoms arising from disturbed nasal physiology can plague the patient for the remainder of his life (Table I).

TABLE I

RESULTS OF POORLY MANAGED NASAL FRACTURES

1. External nasal and septal deformities.
2. Interference with breathing.
3. Headache.
4. Post-nasal discharge.
5. Predisposition to sinusitis at times.
6. Recurrent otitis media at times.
7. Degrees of atrophic rhinitis.
8. Psychological problems.
9. Palatal, facial, and dental deformities in children.

The purposes of this presentation are (1) to consider the nature and diagnostic features of nasal fractures, (2) to suggest methods of reduction and maintenance of fixation which have given satisfactory results in treating these injuries, (3) to outline postoperative care, and (4) to discuss some of the sources of error in management.

The position of the nose renders it particularly susceptible to injury from intrauterine life onward. Little attention is generally paid the nose of the newborn, but Kirchner[1] stresses the frequency of deformities in infants and explains them on the basis of forces applied during the late months of intrauterine life and during the passage of the child through the birth canal.

The nasal framework is composed of interdigitated sections of bone and cartilage. Both must be considered when reducing nasal fractures. Unlike fractures in other sections of the body, the fragments in a nasal fracture are not affected by muscle pull—their displacement following trauma is related purely to mechanical factors.

Isolated fractures of the nasal bones are rare in adults. Usually one or more of the following are also involved: frontal processes of the maxilla, the cartilagenous nasal septum, the perpendicular plate of the ethmoid, the nasal spine of the frontal bone, the maxillary spine, the vomer, and even, at times, the cribiform plate. In children, on the other hand, the nasal bones are not intimately fused as is the case in adults. Therefore, isolated depressed fractures of these structures are not uncommon.

The majority of fractures occur at the junction of the thick upper and thin lower portions of the osseous skeleton.

NATURE OF NASAL FRACTURES

The type fracture depends on the direction, force, site of impact, and the size and shape of the traumatizing object. It may vary in severity

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from a greenstick type to extensive comminution involving the entire nasal compound. Dislocation, or fracture, of the septal cartilage may be associated with fracture of the bony skeleton or may occur independently.

DIRECTION OF FORCE

Generally, the direction of force causing fracture of the nose may be either lateral or frontal, but there are many variations of these basic types.

Lateral force is the most frequent cause. As a result of the impact, the following occurs:

1. On the side of the impact—
   a. The frontal process of the maxilla and the nasal bone are detached from the remainder of the maxilla and the frontal bone in the region of the fronto-nasal and fronto-maxillary sutures and the naso-facial articulation. They are displaced medially and rotated inward.
   b. The naso-maxillary suture is depressed.
   c. There is an apparent lengthening.
2. On the side opposite the impact—
   a. The frontal process of the maxilla and the nasal bone are similarly detached but are displaced laterally, either above or beneath the free edge of the maxilla.
   b. The naso-maxillary suture may be somewhat elevated.
   c. There is an apparent shortening.
3. The nasal septum—
   a. Buckles into a C-shaped position.
   b. May be fractured.
   c. May be dislocated in the region of the maxillary crest or vomer.

Frontal force must be of considerable intensity to fracture the strong upper portion of the bony pyramid, but the lower thin portion will yield to lesser violence. Usually there is considerable comminution of the nasal bones, overlapping of fragments, and perforation of the skin and mucosa. As a result of such impacts:

1. The frontal processes of the maxillae spread outward.
2. The nasal bones are telescoped through the frontal processes with a resulting widening and flattening of the nasal dorsum.
3. There is usually comminution and dislocation of the septum.
4. There is an apparent widening of the intercanthal distance.

Diagnosis depends upon a careful history, clinical examination, and x-ray evaluation. A history of a blow on the nose associated with nose bleed, ecchymosis about the eyes, pain and edema, and obstruction to breathing is presumptive of a nasal fracture.[2] The history might also give valuable information concerning the size and shape of the traumatizing object, the site of impact, and the direction and intensity of the force. A description of the nose prior to injury, reinforced by a photograph, if possible, is helpful for several reasons.

1. For legal purposes—nasal fractures often become a matter of litigation.
2. For medicolegal purposes so that the patient cannot claim failure for a perfectly successful reduction because some pre-existing deformity is still present.
3. To rule out the patient who seeks to exploit a recent fracture in order to obtain correction of a pre-existing deformity.
4. To determine the type of reduction to be performed in view of the type of pre-existing deformity.
5. To allow the physician rendering treatment to more accurately gauge what his optimal achievement can be.

The characteristic signs of nasal fracture include swelling of the soft tissues, ecchymosis of the eyelids and subconjunctiva, tenderness on slight pressure, change in the contour of the nose on inspection and palpation, crepitation, movement of the osseous fragments in some instances, displacement of intranasal structures, laceration of the mucous membranes, and sometimes, hematoma of the nasal septum.

X-RAY STUDIES

From some of the recent literature[2, 3, 4] one might obtain the erroneous impression that x-ray studies in cases of nasal fractures are of little value. Reliance on x-ray diagnosis alone may lead to fallacious conclusions, but when properly taken and interpreted, they can prove to be important diagnostic measures. X-rays may reveal linear fractures without displacement or with slight lateral or medial displacement when these are unaccompanied by distinctive clinical manifestations or masked by edema. Further, they are able to give the physician some idea about the amount of displacement of the fragments. They are also valuable in giving information as to whether or not the nasal spine is fractured or displaced, if that structure can be visualized. It behooves the attending physician not to dispense with x-rays if there are possible legal implications in the case.

Four positions should be taken: two laterals, a standard Waters, and an occlusive view. Soft tissue technic is best used for the lateral views, and the film should be enclosed in cardboard cas-

settes so that it can be placed as close as possible to the injured nose. When interpreting the films, one must be careful not to mistake suture lines and vascular markings on the bones for fractures.

The standard Waters view will give information as to the presence of additional fractures of the surrounding facial bones, particularly of the orbital margins.

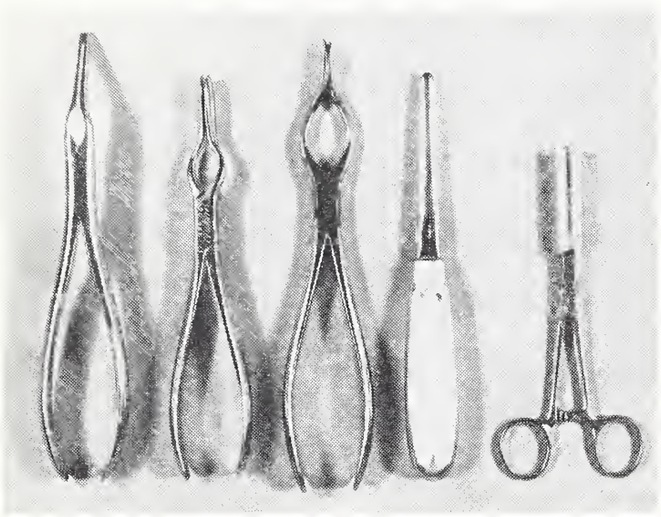

Figure 1. Instruments useful in reducing nasal fractures. Left to right: Asch forceps, central Walsham, lateral Walsham, Goldman septal displacer, Kelly hemostat whose blades are covered with rubber tubing.

An occlusive view helps demonstrate lateral or mesial fragment displacement as well as the condition of the nasal spine in those cases where skeletal contour permits visualization of these structures. The occlusive view is obtained by having the patient hold a small piece of dental film between the teeth in such a manner that it projects horizontally forward. The x-ray beam is then directed downward from above.

METHODS OF REDUCTION

Prior to reduction and maintenance of fixation, the principles of treatment applicable to any traumatic injury are employed. The optimum time to reduce nasal fractures is early—before considerable swelling and ecchymosis occur—for these complications will not only interfere with diagnosis but also with reduction.

Most recent fractures can be adequately handled by closed reduction technics. Once edema has supervened, one has the choice of awaiting its subsidence or using open reduction via the intranasal approach immediately. Old nasal fractures require rhinoplastic reduction.

When edema is minimal, closed reduction can be accomplished under local anesthesia in most adults who have had previous premedication. A short general anesthetic is used for children and for non-cooperative adults.

Local anesthesia is achieved by the topical application of equal parts of 10 per cent cocaine and 1-1000 epinephrine to the nasal mucosa to block the anterior and posterior ethmoid nerves and those entering the nasal cavity through the spheno-palatine foramina. External infiltration of 1 per cent Monocaine® to which 1:100,000 epinephrine and 75 units of hyaluronidase to the ounce has been added is used to block the external nasal, infratrochlear, the nasal branches of the infraorbitals, and the nasal branches of the anterior superior alveolar nerves.

INSTRUMENTARIUM

The instrumentarium usually consists of Walsham and Asch forceps whose blades have been covered with sleeves fashioned from sections of rubber tubing and a flat blade elevator such as has been devised by Joseph or Goldman. Actually, however, these specialized instruments are not absolutely necessary, the purpose being served quite well with a rubber covered Kelly forceps or any blunt instrument capable of elevating fragments (Fig. 1).

Linear fractures: No treatment is necessary.

Greenstick fractures: The depressed segment is elevated from within the nose and when necessary, an attempt is made to straighten the septum by applying medically directed pressure to the convex side.

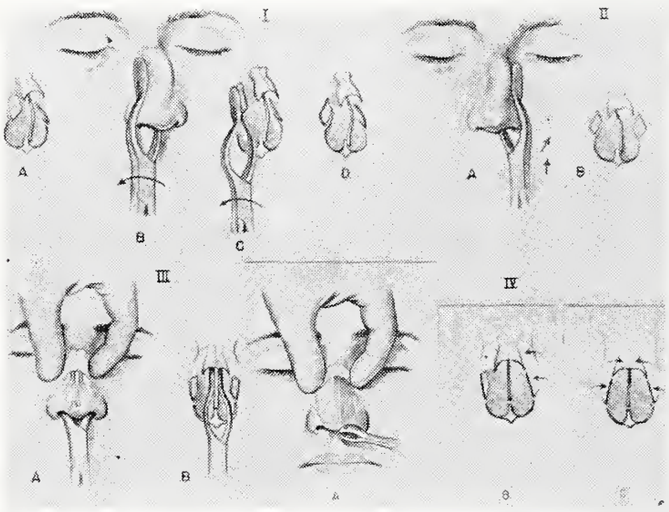

Figure 2. One method of closed reduction of nasal fractures. (Courtesy A.M.A. Arch. Otol.)

Lateral fractures: If the concave side is not impacted beneath the maxilla, it is grasped between the blades of the forceps and rotated laterally. This serves to elevate the entire lateral nasal wall. If the concave side is impacted beneath the maxilla, it must be disimpacted by first depressing and then elevating during rotation of the forceps. The procedure is repeated on the convex, or shortened side. The septum is then placed in the midline with the Walsham septal forceps, being elevated if it has been fractured or dislocated. The mobilized fragments are then "ironed out" over some gently curved, flattened instrument such as the blade of a long Vienna speculum or of an Aufricht glabellar retractor (Fig. 2).

Frontal fractures: These are usually severely comminuted. Attempts are made to elevate and disimpact the lateral nasal walls and septum with elevators and forceps. Quite often this cannot be accomplished, and one must resort to open reduction.

OPEN REDUCTION OF RECENT FRACTURES

The approach to open reduction is the same as used in rhinoplasty. By means of incisions made between the upper and lower lateral carti-

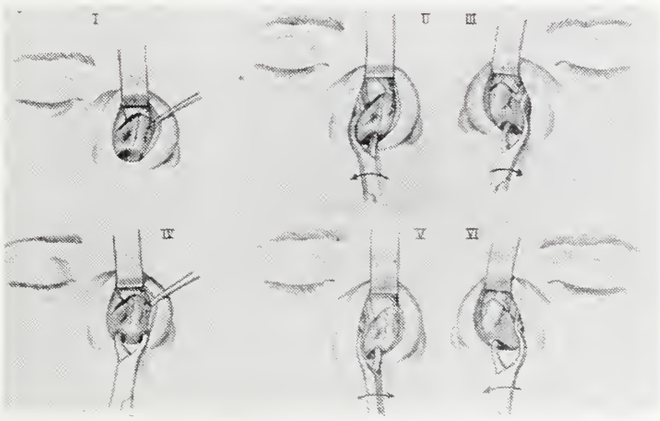

Figure 3. Open reduction of nasal fractures. (Courtesy A.M.A. Arch. Otol.)

lages and transfixion of the caudal end of the septum, the skin, subcutaneous, and muscular tissue overlying the entire dorsum of the nose is elevated. An attempt is made to stay as close to the bones and cartilages as is possible.

When these structures are exposed, the lines, direction, and displacement of the fractures are inspected. The fragments are then disimpacted and realigned under direct vision. If the septal deformity cannot be corrected by closed reduction, the mucoperichondrium of one side is elevated, and the deformity corrected under direct vision also (Figs. 3 and 4).

REDUCTION OF OLD NASAL FRACTURES

Deformities due to old nasal fractures are corrected by rhinoplasty which is merely an extension of the procedure described for open reduction of recent fractures.

Following elevation of the tissues overlying the nasal skeleton through intranasal approach, the

Figure 4. Recent nasal fracture after subsidence of edema. Reduced by the open method.

upper lateral cartilages and nasal bones are separated from the septum and equalized. Lateral osteotomies are done to completely mobilize each lateral wall. The septum is corrected, and the nose placed in the midline (Fig. 5). If there is insufficient projection of the dorsum, this is corrected by bone graft or cartilage implantation.

MAINTENANCE OF FIXATION

Of equal importance to proper reduction of nasal fractures is adequate immobilization and stabilization of the fragments to assist musculoskeletal regeneration.

Any splint used should be closely applied to the underlying structures to prevent formation of further edema and hematoma and should be sturdy enough to protect against external trauma. It must maintain a constant even pressure to immobilize the fragments. Additionally, it should not contribute to further edema by moving synchronously with head and jaw movements. This is the objection to the stent dressing usually recommended. The use of a piece of thin aluminum made from the discs which cover the mouth of disposable intravenous infusion bottles is ideal for this purpose. It is trimmed to size and applied.

When the position of the fragments cannot be maintained or when the entire nasal compound is

severely comminuted, as is the case with some frontal fractures, one may have to resort to through and through wire sutures tied over lead plates on each side of the nose as advocated by Brown.[3]

Figure 5. Rhinoplastic reduction of old nasal fracture. Note equalization of lateral walls and narrowing of the tip.

Intranasal packing consisting of petrolatum or paraffin-impregnated gauze is left in place for three or four days. It is sometimes wise to immobilize a septum which has been dislocated or comminuted by applying flat sheets of dental wax on each side and securing it with mattress sutures as advised by Becker.[5]

These methods of immobilization and fixation will suffice in most cases, however, certain fractures resist maintenance of elevation. In such cases, the nasal depressed dorsum must be elevated by the implantation of cancellous bone or cartilage at a later date.

POSTOPERATIVE CARE

During the first postoperative day the patient is given three injections each of 40 units of ACTH gel and 1 cc of alfachymotrypsin to minimize edema. If an open reduction or rhinoplasty was necessary, foam rubber pressure dressings are used over the eye and surrounding areas for the first 24 hours for the same purpose.

All patients with uncomplicated nasal fractures, including those requiring open and rhinoplastic reductions, are discharged from the hospital at the end of the first postoperative day or sooner. Since presence of edema is a convincingly significant factor in poor and irregular healing, these patients should be encouraged to remain ambulatory upon discharge to promote edema subsidence.

Intranasal gauze packing is removed in a maximum of three days, but dental wax sheets, when used, may remain in the nose for up to two or three weeks. Removal of the external splint varies with the case and the amount of edema. The minimum time is usually five days, but it may be necessary for the patient to wear it as long as two weeks.

Following removal of the splint, it is advisable to guard the nose from even the slightest trauma for about six weeks. Towards this end, participation in athletics is prohibited and the wearing of eye glasses in the usual manner banned. Anything that would cause edema of the external or internal nasal tissues, including prolonged exposure to sunlight should be avoided. All normal activities may be resumed at the end of six weeks.

SOURCES OF ERROR IN MANAGEMENT

Several pitfalls may trap the unwary in the management of nasal fractures:

1. Obscuration of the fracture on inspection and palpation by edema, hematoma, and hemorrhage.
2. Overlooking of the nasal fracture because of the exigency of the injury.
3. Failure to recognize associated facial or septal fractures which might interfere with successful reduction.
4. Poor reduction technic due to a faulty concept of the nature of nasal fractures and the mechanical maneuvers required to correct them.
5. Complete dependence on x-ray or the use of improper x-ray technic.
6. Poor management of associated hematomas and soft tissue injuries.
7. Inadequate fixation.
8. Failure to resort to open and rhinoplastic types of reduction when indicated.
9. Reliance on splinting to correct improperly reduced fractures. ★★★

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Middle Lobe Syndrome

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The term "middle lobe syndrome" is usually applied to the chronic pneumonitis, bronchiectasis or abscess formation which is caused by, or occurs distal to, partial or complete occlusion of the middle lobe bronchus. The bronchostenosis is usually due to compression of the long and narrow middle lobe bronchus by enlargement of peribronchial lymph nodes secondary to the pulmonary infection. However, fungus infection or neoplasm can also produce bronchial obstruction.

The sequelae of middle lobe bronchus occlusion are similar to those which result from bronchial obstruction elsewhere in the lungs. The patient with a middle lobe syndrome often exhibits repeated attacks of febrile pneumonitis, with or without a productive cough, wheeze, or hemoptysis. The diagnosis is established on the basis of the history and physical examination, PA and lateral chest x-rays, bronchoscopy and bronchograms. Middle lobe pneumonia, if treated promptly with antibiotics, need not develop into chronic middle lobe syndrome. Once chronic bronchostenosis and distal infection are established, right middle lobectomy is often required. The author presents an illustrative case of right middle lobe syndrome with multiple abscesses.

THE TERM "MIDDLE LOBE SYNDROME" has come to denote a pathologic state which results from a more or less predictable series of events. Specifically, it has been increasingly appreciated that complete obstruction of a bronchus may or may not be associated with distal infection, but incomplete obstruction of a bronchus commonly results in a certain degree of distal pneumonitis. This may eventually produce bronchiectasis and, not infrequently, lung abscess.

PATHOPHYSIOLOGY

This train of events is usually as follows: (1) Pneumonitis results in enlargement of the peribronchial lymph nodes. (2) These nodes enlarge and at times become calcified, compressing the bronchus. (3) Partial occlusion of the bronchus permits air to enter the lobe more easily than it can escape. Overdistention of the lobe, or lobar emphysema, is often visualized with the chest x-ray. (4) Repeated infection distal to the obstruction causes destruction of the lung parenchyma and atelectasis. The bronchial obstruction often subsides between the early attacks of lung infection, but eventually the occlusion is almost complete and the lobe functionless.

The middle lobe bronchus is especially susceptible to compression because it is long and narrow and is surrounded by numerous lymph nodes. This increased susceptibility of the middle lobe has given rise to the term "middle lobe syndrome," although the pathophysiologic processes which the term connotes may involve other pulmonary lobes or segments. Furthermore, in addition to suppurative diseases the bronchial occlusion may be due to tuberculosis, fungus infection or neoplasm.

The patient frequently gives a history of repeated episodes of pulmonary infection ("pneumonia") with fever. There may have been a productive cough which usually developed several days following the onset of the illness. This delay is presumably due to initial bronchial occlusion with patency later. Where there is no acute febrile episode, the patient may complain of hemoptysis from time to time. In the absence of tuberculosis, one of the most common causes of non-neoplastic hemoptysis has been "dry bronchiectasis," frequently in the right middle lobe. Thus in the patient whose chest roentgenogram has revealed infiltration in the region of the right middle lobe (Fig. 1), particularly when he or she is not acutely ill at the moment, the possibility of a chronic middle lobe syndrome should be considered. A

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wheeze produced by passage of air through the partially occluded bronchus is frequently present and audible to the patient. The appearance of a wheeze may precede expectoration of considerable amounts of suppurative material which has been trapped behind a completely occluded bronchus. The disappearance of the wheeze is usually indicative of relief of the bronchial compression, as the infection and lymph node enlargement subside.

On physical examination rales or a wheeze may be detected over the right middle lobe anteriorly. More frequently, however, very little is detected on physical examination. When the right middle lobe is completely atelectatic (Fig. 1), it occupies relatively little volume in the right hemithorax as it is overlapped by the upper and lower lobes. Percussion and palpation are not particularly helpful in diagnosing complete atelectasis of the right middle lobe.

On the plain films of the chest (PA and lateral views) one may see evidence of atelectasis or infiltration in the region of the right middle lobe. It can be seen in Figure 1 that there is an infiltration with associated calcified nodes in the PA view, as well as an increased density on the lateral view overlying the usual site of the right middle lobe. The atelectatic right middle lobe now occupies a very small portion of the right hemithorax.

Once the plain films of the chest have indicated disease in the right middle lobe, bronchograms should be performed in conjunction with bronchoscopy. If its bronchus is completely occluded, the middle lobe will not fill. If the radiopaque medium does enter the diseased lobe, it may demonstrate occlusion of a segmental (medial or lateral) bronchus or the bronchi may fill and demonstrate bronchiectasis of one or more of the major bronchi of the right middle lobe. Upon occasion one of the films will demonstrate an abscess. Thus it is always helpful to secure the bronchograms, for they often demonstrate the extent and nature of the pathology. This has a bearing upon the probable prognosis in the given case and may show whether or not pulmonary resection is indicated.

Bronchoscopy, another important measure, is usually performed just prior to insertion of the tube for the bronchography, but this is not invariably the case. By means of direct visualization of the middle lobe bronchus, as well as all other bronchial orifices, it may be noted that suppurative material or blood emerges from the middle lobe orifice only. In identifying the source of the pulmonary hemorrhage or purulent secretion at bronchoscopy, it is often helpful to ask the patient to cough. Besides the visualization of blood or suppurative material emerging from the middle

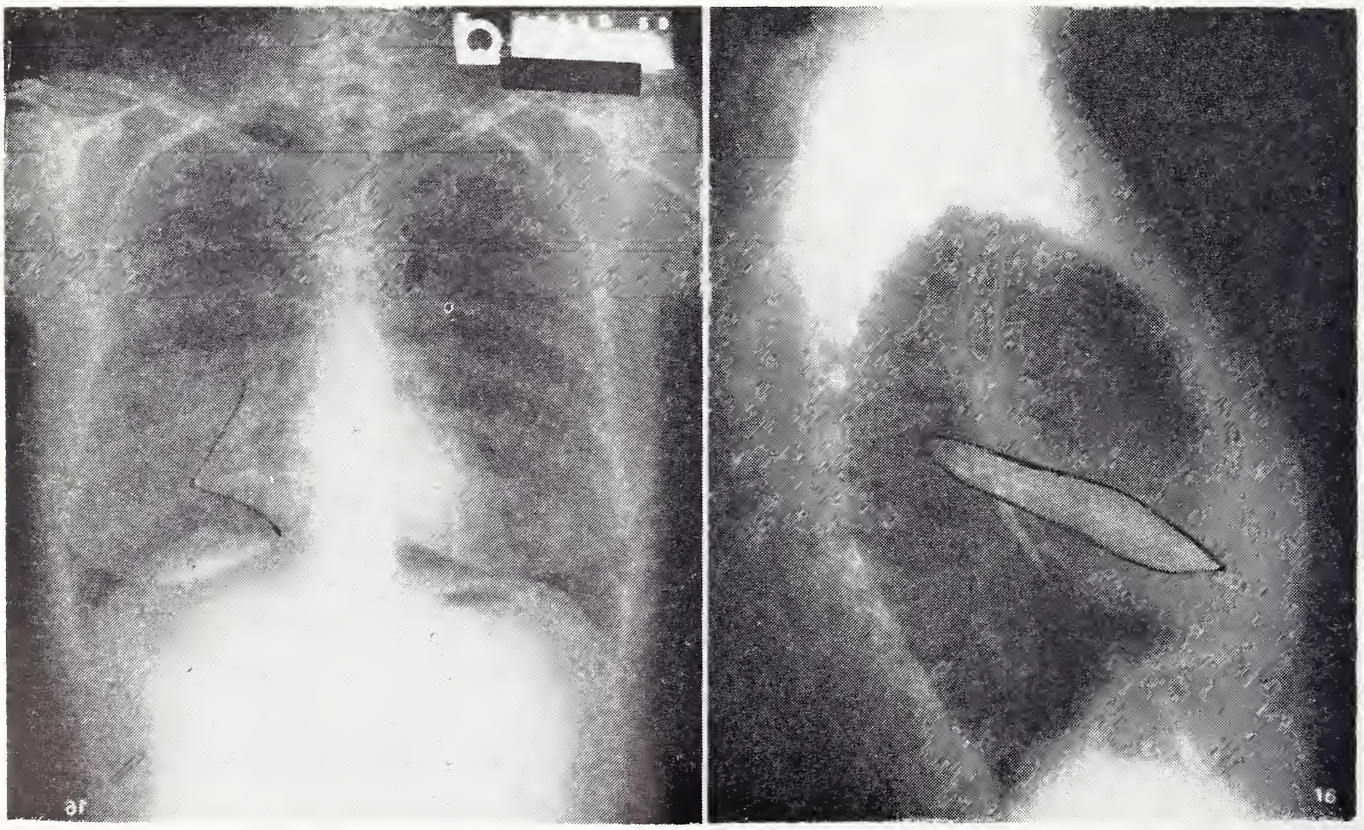

Figure 1. Atelectasis of right middle lobe.

lobe (or any other) orifice, one may also note stenosis of this orifice; whether or not it appears to dilate normally on inspiration; and whether there is distortion of the orifice itself or in its take-off from the right intermediate bronchus. The possible presence of a small tumor, perhaps a bronchial adenoma, compressing the orifice of the right middle lobe must be considered. Furthermore, if lobectomy is to be performed, it is essential to know if disease such as possible active tuberculosis involves the orifice of the bronchus itself. It is important not to cut through active infection of a neoplasm in dividing the bronchus at operation.

In the course of bronchoscopy, washings may be secured for histologic study for tumor cells and cultured for tuberculosis, fungus diseases, and other microorganisms.

MANAGEMENT DECISION

Not every patient who has disease in the right middle lobe need be subjected to right middle lobectomy. It is particularly important during the early attacks of pneumonitis that the patient be intensively treated medically with antibiotics, postural drainage, and other measures to avoid repeated infections. A major objective is to stop intermittent or chronic infection which may lead to stenosis of the middle lobe bronchus. If right middle lobe pneumonia is managed vigorously at the outset, many patients will never require right middle lobectomy. Surgery is required only for the complications of the repeated right middle lobe infection. These complications, as mentioned previously, consist of the chronic bronchial stenosis, distal infection with hemoptysis, periodic febrile episodes, and at times bronchiectasis and/or lung abscess. Once a chronic stage of the disease has been reached, with virtual distruction of the right middle lobe due to recurrent infection, right middle lobectomy will be indicated in perhaps the majority of patients. This operation is readily performed, and such patients are almost invariably cured of their chronic lung disease.

CASE REPORT

GY, female, white, aged 49, was admitted to the University Hospital August 18, 1959. She had worked in a cotton mill since the age of 15 and along with her associates had had the usual respiratory infections. Approximately two months prior to admission she developed a dry, nonproductive cough. Later, she brought up moderate amounts of purulent sputum, but she coughed up no blood. She occasionally ran fever.

She was examined by her physician whose roentgenographic studies revealed atelectasis of the right middle lobe. He considered the possibility of tuberculosis, pneumoconiosis, chronic suppurative disease, fungus infection, and even neoplasm. She was referred to the writer for bronchoscopy and bronchograms, as well as related studies.

On physical examination a woman in no particular distress was observed. She had an occasionally productive cough, but she did not appear to have a chronic disease that might have resulted in substantial weight loss. The temperature was 99.6°, pulse rate 96, and respirations normal. Despite the prior knowledge of atelectasis of the right middle lobe, physical examination of the chest was essentially nonrevealing. There was same evidence of emphysema, which doubtless accounted for the somewhat distant breath sounds throughout the lungs.

The white blood cell count was 10,000 and the hemoglobin 81 per cent. The urinalysis was within normal limits.

The posterior-anterior and lateral films of the chest are shown in Figure 1. The infiltration and areas of calcification in the region of the right middle lobe are apparent. These findings were considered to reflect probable atelectasis and pneumonitis of the right middle lobe. The remaining portions of the lungs were within normal limits. The bronchograms revealed complete occlusion of the right middle lobe bronchus (Fig. 2), and thus it was not possible to determine whether or not bronchiectasis existed in this portion of the right lung.

Bronchoscopy was performed and the pathology visualized in the tracheobronchial tree was limited

Figure 2. Bronchogram revealing no filling of right middle lobe bronchus.

to the region of the orifice of the right middle lobe bronchus and the continuing bronchus to the lower lobe. There was almost complete occlusion of the edematous, inflamed, and slightly rotated right middle lobe orifice. However, some purulent secretion emerged from this bronchus when the patient was asked to cough. There was no blood. There was some narrowing of the continuing bronchus to the right lower lobe, but this was not considered to be sufficiently marked to result in serious ventilatory embarrassment of the lower lobe. It was felt that chronic peribronchial disease had resulted in the bronchial findings noted.

Secretions were aspirated from adjacent the right middle lobe orifice to be examined for acid-fast bacilli, fungi, and tumor cells. Bronchial washings were then obtained by irrigating with saline solution.

Four separate examinations of sputum and bronchial secretions were negative for tuberculosis organisms on smear. No evidence of tumor was found. The stenosis of the right middle lobe bronchus, which had been known to exist for several weeks, plus her sputum and mild fever, prompted a decision in favor of right middle lobectomy.

On August 21, with the patient in the left lateral decubitus position and under general endotracheal anesthesia, a right thoracotomy was performed through the right fifth intercostal space. There were surprisingly few adhesions and the right middle lobe was found to be completely collapsed, being approximately the consistency and color of liver tissue (Fig. 3). There were numerous hard lymph nodes and much dense inflammatory reaction surrounding the middle lobe bronchus. It appeared that the extensively diseased lobe was functionless, and this was confirmed when the lobe had been resected and was opened. It was found to harbor multiple lung abcesses, and this was the diagnosis returned by the pathologist.

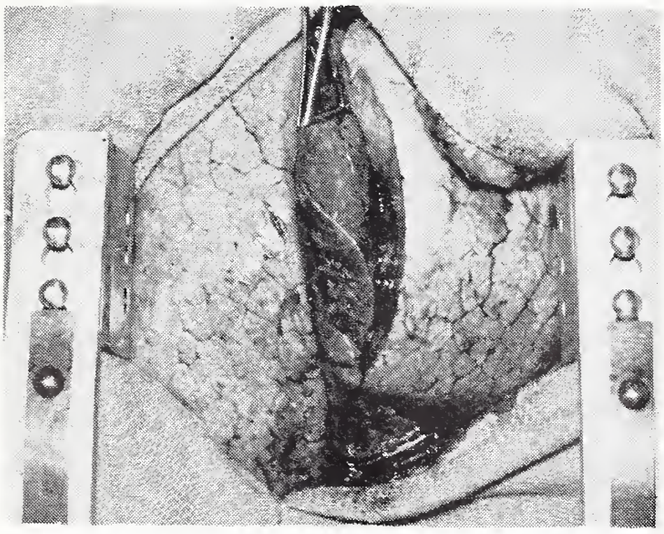

Figure 3. Complete atelectasis of right middle lobe. The lobe contained multiple abscesses.

Thus, this lobe was totally useless in respiration, and it was the seat of a chronic infection which could have flared into a far more serious condition at any time. In fact, it was surprising that she had not experienced even more systemic reaction to the extensive lobar infection. The reason that she did not have more fever was probably that the bronchus occasionally opened and drained, thus affording intermittent decompression of the abscess cavities. The patient recovered uneventfully from the operation and has since remained well.

DISCUSSION

The mechanism of the pathogenesis of the right middle lobe syndrome is an important general concept for the physician to bear in mind. Regardless of the portion of lung supplied, the gradual occlusion of the bronchus by endobronchial infection, internal stenosis by tumor, or by external compression by calcified lymph nodes or by other means, results in a definite train of events. First there is overdistention of the lung, lobe or segment. Later the continuation and progression of such obstruction may finally occlude the bronchus to the point that inadequate air gets into the distal pulmonary tissue to inflate it even to a normal volume. Atelectasis then develops.

Atelectatic lung distal to a partially obstructed bronchus is highly likely to be the site of bacterial infection. This may consist initially of recurrent bouts of pneumonitis ("pneumonia"), but later these repeated infections cause irreversible changes in the bronchi and in the parenchyma of the lung. Such changes consist of chronic fibrosis as a result of the infection, occlusion of the bronchi by chronic bronchial disease, bronchiectasis in some instances due to disease in the wall and surrounding the bronchi (perhaps abetted by the overdistention of the stenosed bronchus by mucoid material and pus), and sometimes, as seen in the present case, lung abscess. Unfortunately, once stenosis of a major bronchus has been produced, the process or stricture is often irreversible by instrumental dilation or other means. In such patients pulmonary resection is often required.

Thus, it is seen that the middle lobe syndrome serves as a very useful demonstration of the general nature of suppurative disease which results from partial or complete bronchial obstruction to any part of the lung from whatever cause. ★★★

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Clinical Picture of Fluid Imbalances

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The diagnosis of fluid and electrolyte imbalances is simplified into 17 basic conditions each with its own clinical picture. These electrolyte imbalances may occur separately or in combination with other imbalances. Understanding the basic physiology is important in reaching a diagnosis. By using this clinical picture approach, the general practitioner can diagnose these imbalances without complicated laboratory assistance.

THE CLINICAL PICTURE APPROACH to diagnosis is commonly used by physicians in studying various disease states. One does not memorize the various physical and laboratory findings of a disease, but sees the condition as a total composite which includes clinical history, symptoms, clinical findings, and laboratory data.

The following clinical approach to the diagnosis of fluid and electrolyte imbalances is adapted from that presented in the *Fluid Balance Handbook for Practitioners* by Snively and Sweeney. In the clinical picture system, the fluid imbalances are studied by learning the underlying mechanisms responsible for them. These basic fluid imbalances are discussed as clinical pictures. By virtue of one's knowledge of the physiology of disease, the fluid imbalances likely to occur in each disease can be determined. It should be realized that this is a simplified approach to the problem of fluid and electrolyte balance, but nevertheless a useful one.

Figure 1 portrays the various ways which water and electrolytes may be gained or lost by the body. There are many more ways by which fluids and electrolytes can be lost than gained. The losses amount to approximately 1,500 ml per square meter of body surface area per day in a healthy individual.

In addition to abnormalities in the intake and output of water and electrolytes, some disease states are characterized by fixation of water and electrolytes within the body. These substances may be lost, in the physiologic standpoint, by the accumulation of liquid in distended intestines or ascites. Deficits can also result from the increased use of water and electrolytes, such as occurs in infectious disease with a high fever. Some imbalances occur because of malfunctioning of the body homeostatic mechanisms (Fig. 2), the renal-cardiovascular system, adrenal, pituitary, and parathyroid glands. Fortunately, however, these disturbances are a minority group.

Although there are many factors that may cause fluid imbalances, all of these can be logically divided into 17 separate imbalances (Fig. 3). Each of these has its own clinical picture. These imbalances may occur alone or in combination or may proceed from one imbalance to another during the course of the disease.

Twelve of these 17 basic fluid imbalances stem from changes in properties of extracellular fluid. These include changes in volume (excess or deficit), changes in the sodium content, sometimes called total electrolyte content (excess or deficit), changes in the potassium content (excess or deficit), changes in the calcium content (excess or deficit), changes in the base-bicarbonate content (excess or deficit), and changes in the carbonic acid content (excess or deficit). Two of these imbalances relate to changes in the position of extracellular fluid and three from the nutritional status of the body. Listed below in capsule form are the key clinical findings for each of the 17 basic fluid and electrolyte imbalances.

Extracellular Fluid Volume Deficit: There is a history of abruptly decreased intake of water and electrolytes, vomiting or diarrhea. The hemoglobin is elevated. The key clinical findings are

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dry skin and mucous membranes, oliguria and weight loss.

Extracellular Fluid Volume Excess: There is a history of excessive infusion of isotonic saline or chronic kidney disease. The hemoglobin is depressed. The key clinical findings are puffy eyelids, moist rales in the lungs, pitting edema, and rapid weight gain.

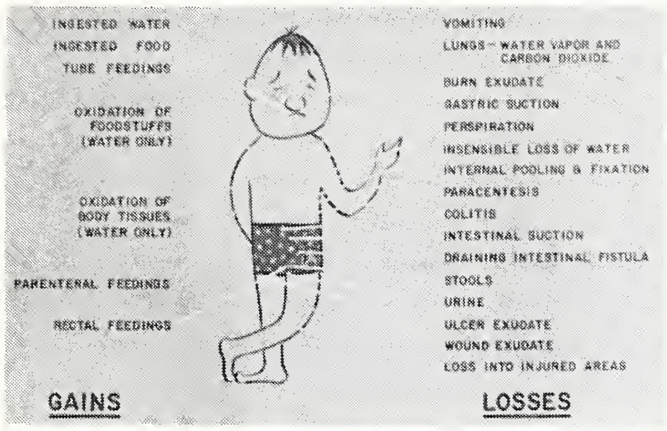

Figure 1. Gain and loss of water and electrolytes.

Sodium Deficit: There is a history of excessive sweating plus drinking water, excessive infusion of carbohydrate and water or gastrointestinal suction plus drinking water. The laboratory findings include depressed plasma sodium level and a depressed specific gravity of the urine. The key clinical findings are apprehension, abdominal cramps, and diarrhea.

Sodium Excess: There is a history of excessive infusion of isotonic saline, tracheobronchitis or copious, watery diarrhea. The laboratory findings include an elevated plasma sodium and an elevated urine specific gravity. The key clinical findings are excitement, dry, sticky mucous membranes and oliguria.

Potassium Deficit: There is a history of diarrhea, ulcerative colitis or recovery from diabetic acidosis. The plasma potassium is depressed. The key clinical findings are anorexia, silent intestinal ileus, and soft muscles.

Potassium Excess: There is a history of burns, crushing injury, kidney disease or excessive infusion of potassium solutions. The plasma potassium is elevated. The key clinical findings are oliguria, intestinal colic, and diarrhea.

Calcium Excess: There is a history of tumor of parathyroid glands, excessive vitamin D for therapy or multiple myeloma. The plasma calcium is elevated. The key clinical findings are relaxed muscles, flank pain, and deep thigh pain.

Calcium Deficit: There is a history of sprue, acute pancreatitis, hypoactive parathyroid glands or excessive infusion of citrated blood. The plasma calcium is depressed. The key clinical findings are tingling of fingers and tetany.

Primary Base Bicarbonate Deficit: There is a history of excessive infusion of isotonic saline or diabetes mellitus. The laboratory findings are an acid urine and depressed plasma bicarbonate. The key clinical findings are disorientation, shortness of breath on exertion, and deep rapid breathing.

Primary Base Bicarbonate Excess: There is a history of vomiting, excessive infusions of alkalies or gastric suction. The laboratory findings include alkaline urine and elevated plasma bicarbonate. The key clinical findings are hypertonic muscles and tetany.

Primary Carbonic Acid Deficit: There is a history of deep rapid breathing, oxygen lack, fever or salicylate intoxication. The laboratory findings include alkaline urine and depressed plasma bicarbonate. The key clinical findings are deep rapid breathing and tetany.

Primary Carbonic Acid Excess: There is a history of pneumonia, emphysema, morphine poisoning or respiratory suppression. The laboratory findings include an acid urine and an elevated plasma bicarbonate. The key clinical findings are disorientation and respiratory embarrassment.

CHANGES IN THE POSITION OF EXTRACELLULAR FLUID

Plasma to Interstitial Fluid Shift: There is a history of burns, massive crushing injuries or intestinal obstruction. The hemoglobin is elevated. The key clinical findings are unconsciousness, pallor, and low blood pressure.

Interstitial Fluid to Plasma Shift: There is a history of excessive infusion of hypertonic solutions, recovery phase of plasma to interstitial fluid shift or compensation following loss of whole blood. There is a depressed hemoglobin. The key

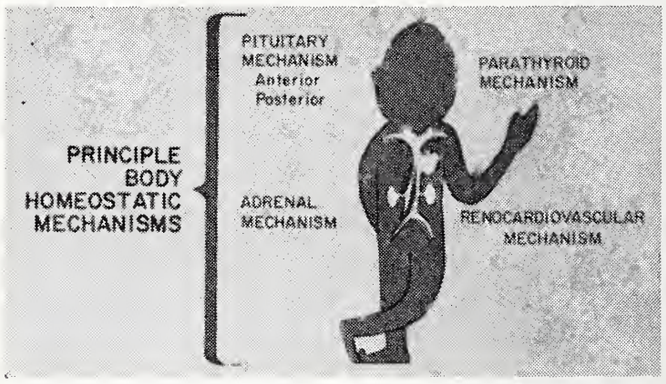

Figure 2. Principal body homeostatic mechanisms.

clinical findings are bounding pulse, pulmonary edema, and engorgement of peripheral veins.

CHANGES IN THE NUTRITIONAL STATUS OF THE BODY

Protein Deficit: There is a history of hemorrhage, trauma, wounds or ulcers. The hemoglobin is depressed. The key clinical findings are anorexia, weight loss, and loss of muscle mass and tone.

Caloric Deficit: There is a history of decreased food intake, gastrointestinal disease or chronic infection. There is acetone in the urine. The key clinical findings are mental depression, shortness of breath, and loss of muscle mass and tone.

Vitamin Deficit (Composite): There is a history of chronic infection, severe injury, or inadequate diet. There are characteristic x-ray findings in specific deficiencies. The key clinical findings include night blindness, beefy-red tongue, bleeding gums, starvation, impaired wound healing, and bowed legs.

These 17 basic fluid and electrolyte imbalances may exist alone or in combination. Sometimes a succession of imbalances follows, one after another. These imbalances modify and are modified by co-existing pathologic states. Listed below are examples of the clinical picture approach to the management of fluid and electrolyte imbalances.

CASE HISTORIES

Case No. 1. An 18-year-old Marine recruit was admitted with a history of marching for several hours in the hot sun. As a punishment for a minor rule infraction, his drill instructor had prevented the patient from drinking water. His tongue was parched and dry, his skin was hot. His hemoglobin was elevated. Applying the clinical picture approach, this man is diagnosed as suffering from an extracellular fluid volume deficit.

Case No. 2. This is a 42-year-old woman with ulcerative colitis who has lost large amounts of potassium in diarrheal stools. Because of an anorexia, she has not been able to eat. From this background, it is known that this patient has a potassium deficit.

Case No. 3. This patient, on his second postoperative day following a partial gastric resection, was receiving continuous gastric suctions and was permitted water ad lib. Since gastric secretions are rich in chloride, he is diagnosed as suffering from a base-bicarbonate excess (metabolic alkalosis). Chloride and bicarbonate are both anions. The total number of cations must always equal the total number of anions and if one anion is lost, another will build up. In this case, the loss of chloride causes an increase in base-bicarbonate with resulting alkalosis.

Case No. 4. This patient suffered a severe second and third degree burn over 40 per cent of his body. His pulse was thready and of low volume. The hemoglobin was elevated. From this it was decided that he was undergoing a plasma to interstitial fluid shift, common in burn shock. On the third day post burn, this patient developed pulmonary edema and diuresis. His hemoglobin and hematocrit had dropped significantly. From this it was known that the patient was undergoing an interstitial fluid to plasma shift.

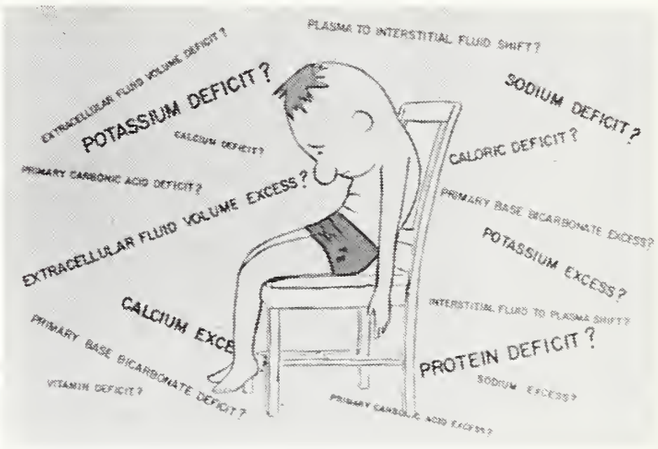

Figure 3. Seventeen fluid imbalances.

Case No. 5. This man, employed near the blast furnace in a steel mill, was subjected to extreme heat. He had drunk excessive quantities of water without taking salt tablets. He complained of abdominal cramps and diarrhea, and his urine had a low specific gravity. He was diagnosed as having a sodium (total electrolyte) deficit.

Case No. 6. This patient with an acute infectious disease received an excess quantity of an isotonic solution of sodium chloride. The chloride replaced the base-bicarbonate, and he had a base-bicarbonate deficit (metabolic acidosis).

DIAGNOSIS OF FLUID AND ELECTROLYTE IMBALANCES

The diagnosis is made by taking into consideration the history, physical findings, and laboratory findings, and appropriate therapy instituted (Fig. 4).

History. A careful clinical history is of first importance in determining the imbalance present. The intake and output of fluid during the past few days should be estimated. Questions such as this should be asked:

1. Has the patient been eating and drinking normally?
2. Have therapeutic fluids been given by tube, rectum or parenterally?
3. Have abnormal losses of body fluids occurred in the form of perspiration, vomiting, gastric or intestinal suction, enterostomy, drainage from fistulas, liquid stools, wound or burn exudate?

Physical Examinations. During the physical examination, key findings should be set down that indicate a specific clinical picture.

Laboratory. Simple laboratory determinations such as the hemoglobin and the specific gravity of the urine are early obtainable. Other laboratory studies, such as determination of the various serum electrolytes and the pH can be requested if available.

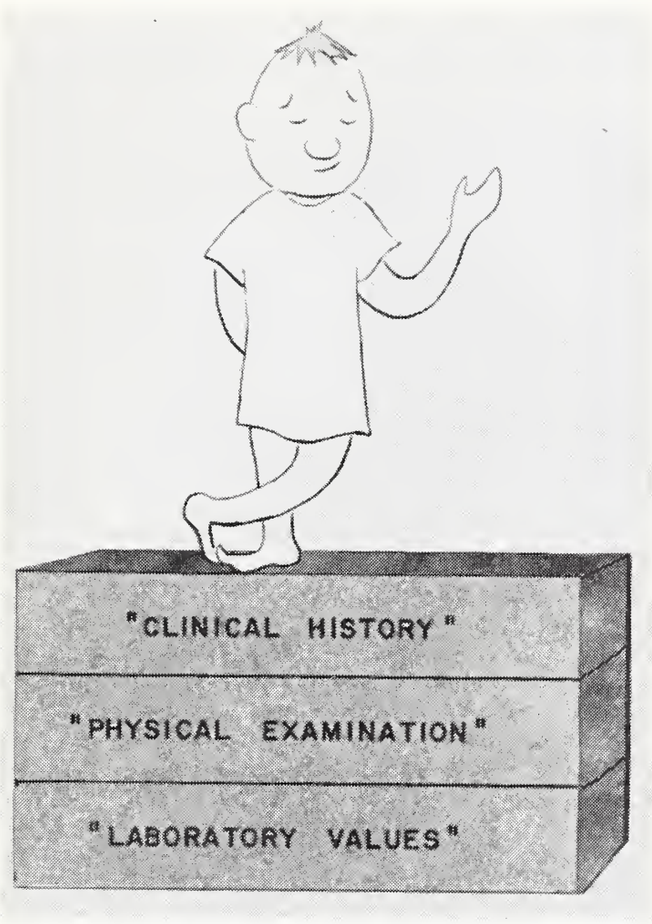

Figure 4. Factors in diagnosis.

Summary. All fluid and electrolyte imbalances can be divided into 17 separate clinical conditions. These may occur separately or in combination or a succession of imbalances may occur. A simplified system of diagnosis using the clinical picture approach has been presented. ★★★

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NEW DRUG DECREASES IN COST

For the second time since November 1959, the Schering Corporation announced price cuts for Fulvicin, its brand of griseofulvin, an oral antifungal agent. First slash came November 17 when a 20 per cent decrease was announced. Latest action in January dropped the price another 15 per cent for a total reduction of 35 per cent in seven weeks. Schering was one of several drug manufacturers appearing before the Senate Antitrust and Monopoly subcommittee during pricing practices hearings at Washington in December. Fulvicin was not among drugs discussed, the subcommittee having concentrated on price levels of corticosteroids.

Clinicopathological Conference II

Conducted by the Department of Pathology
University of Mississippi
School of Medicine

Jackson, Mississippi

A 69-year-old male, who died eight and one-half hours after being hospitalized with apparent myocardial infarction, is the subject of Journal M.S.M.A.'s second clinicopathological conference. Clinical and diagnostic findings are discussed, and the autopsy report is given. Participants in the conference are Drs. Thomas M. Blake and Herbert G. Langford, Department of Medicine; Joel G. Brunson, Department of Pathology; and Kenneth C. Coffelt, Department of Pathology, all of the University of Mississippi School of Medicine. Dr. Catherine G. Goetz, Department of Pathology, prepared the report of the conference.

THIS 69-YEAR-OLD WHITE MALE was admitted to the University Hospital at 8:05 a.m. on September 30, 1959, complaining of severe substernal pain of eight hours duration. In May 1957, he was hospitalized with severe chest pain and a diagnosis of myocardial infarction was made. He remained on anticoagulation therapy for several months and was asymptomatic except for rare episodes of chest pain which were relieved by rest and/or nitroglycerin until September 27, 1959. He visited his physician that day because of severe pain. An electrocardiogram was abnormal because of depressed ST segments. His chest x-ray was normal. Recommended hospitalization was refused.

PHYSICAL EXAMINATION

Physical examination showed a blood pressure of 160/80, pulse, 90, respiration, 20. He was well developed, well nourished, and moderately dyspneic. His skin was "cool and clammy," but there was no cyanosis. His lungs were clear. His heart was not enlarged and had a regular rhythm. No murmurs were heard. The remainder of the examination demonstrated no abnormalities.

Urinalysis showed albumin and glucose—negative, WBC 10-15/HPF. Hemoglobin was 15.4 grams, and the hematocrit was 46 vol. per cent. The total white count was 10,000 with two monocytes, 15 per cent lymphocytes, 65 per cent segments and 18 bands. An electrocardiogram showed "marked depression of ST in V_1-V_4, slight deviation ST segments in II, III, aVf and V_6."

After receiving meperidine and oxygen, he rested quietly until 10:30 a.m. He again complained of pain. His blood pressure was 90/60 and a harsh apical systolic murmur was heard. At 1 p.m. his blood pressure was 80/70. There was a temporary response to "Levophed," but at 4:10 p.m. he became severely dyspneic. He was cyanotic, in "pumonary edema," and no blood pressure or pulse could be obtained. There was no response to rotating tourniquets, 15 mg morphine sulphate, or 1.5 mg Cedalanid intravenously. He was pronounced dead at 4:30 p.m.

DISCUSSION

Dr. Blake: "Outside in the corridor just a few minutes ago, a couple of unusually astute medical students said, when asked what they thought the CPC was today, 'Well, it looks pretty straightforward except that it is a CPC. It looks to me like a myocardial infarct and simple heart failure.' I agree that it looks reasonably straightforward, but I don't think it's quite so easy.

"This patient was a 69-year-old male who was admitted with what sounded like a myocardial infarct. He was evidently well until some 16 months or so before admission when he had a bout of chest pain treated elsewhere with a diagnosis of myocardial infarction. The specific electrocardiographic criteria aren't given, but it seems reasonable to assume that he had a myocardial infarct. Apparently, he did well subsequently. There is

no mention of congestive heart failure or of hypertension. He just had a little bit of angina and evidently was active. His anticoagulants, fortunately or unfortunately as the case may be, were discontinued. He seems to have done all right, then, until three days before he came back into the emergency room.

APPARENT MYOCARDIAL INFARCT

"At that time he had another bout of chest pain and his doctor made an electrocardiogram which showed ST segment changes. These aren't described in detail, but I should think that they can be reasonably interpreted as supporting what was undoubtedly the clinical impression that he was having at least coronary insufficiency if not another myocardial infarct. He refused hospitalization. One can't help speculating what difference it would have made in his subsequent course had he acceded to his doctor's suggestion and allowed himself to be admitted. It seems he got over that episode; at least nothing is said about subsequent pain for the next two and one-half days until eight hours before admission when he again had severe substernal pain.

"I suspect that the lack of any further description of this pain in the protocol is a result of the fact that it just seemed so apparent that this man had a myocardial infarct. I suspect that is what I would have thought had I seen him in the emergency room appearing as he did—cool and clammy, not hypotensive, not in shock, not in heart failure, complaining of chest pain with a fundamentally negative physical examination. Specifically, the thing which needs to be noted most from his physical examination, and this is what is so often lacking when this problem arises, is a statement to the effect that he did not have any murmurs at the time of admission. Somebody has suggested that whether murmurs appear or disappear is as much a function of how many people examine the patient as it is whether they actually change, but this I think is too facetious for the circumstances. He didn't have a murmur when he came in. His CBC and his urine studies didn't help much—well, they didn't help at all.

"His electrocardiogram, of course, did help. At least it fits beautifully into this discussion. The remarks in the protocol concerning the tracing were taken from the description of the abnormalities rather than from the interpretation itself, but the interpretation wasn't much different from the remarks. ST-T changes are characteristic of recent myocardial injury but do not establish the diagnosis of myocardial infarction. This in a patient who was thought to have a myocardial infarct would be strong evidence to support the clinical impression. (Tracing is shown in Fig. 1.)

"What this tracing shows is marked ST segment depression in midprecordial leads. ST segment deviation was the term I used to imply evidence of injury in the electrocardiogram. This circle that is drawn down here means that we were looking at the QRS complex in lead aVf with considerable interest. We must have been thinking in terms of posterior infarct but concluded that it was not likely—at least not diagnosable from this. An infarct of the diaphragmatic surface of the heart is characterized, among other things, by depression of the precordial ST segments, but it is also characterized much more strikingly by elevation of the ST segment in leads 2, 3, and/or aVf. The changes here suggested subendocardial injury more than posterior myocardial infarction.

"This brings up a subject which is not very popular these days at all, but which was popular about 10 years ago and for a few years after that —subendocardial infarction. It is possible, of course, to have an infarct in the myocardium which is big enough to merit the term infarct, as distinguished from a tiny one which we would call patchy fibrosis, and yet does not involve the thickness of the myocardium from endocardium to epicardium. It is not a transmural infarct. The characteristic QRS changes in the electrocardiogram which allow us to make a diagnosis of myocardial infarct with confidence are found in transmural infarction. When an infarct involves only the deeper part of the myocardium, the QRS changes are not so nearly diagnostic.

"Subendocardial infarcts were popular for a while and then Dr. Prinzmetal came along and

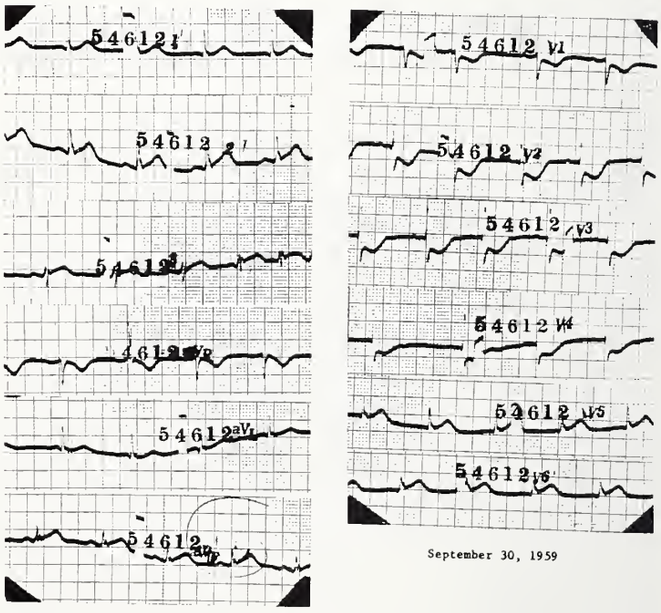

Figure 1. Electrocardiogram tracing.

pointed out that the inner half or perhaps two-thirds of the myocardium is electrographically silent. Subsequently, this view sort of distilled into the idea that "subendocardium" just must mean a great deal thicker layer of the myocardium than had been thought before, and anything that is not subepicardial is subendocardial. Subendocardial infarction, then, simply would mean that the infarct would not include the subepicardial layers. It might include the inner two-thirds or even three-fourths of the myocardium and still be called subendocardial. This tracing doesn't diagnose it, but the distribution of the ST segment changes and the presence of tiny Q waves in these right sided precordial leads does suggest it. Another thing which is helpful in making this diagnosis, if control tracings are available, is lowering of the R waves even in the absence of Q waves, but we can't make any comment about that here because we don't have a previous tracing. The fact that we can't diagnose the old infarct from this tracing is not surprising. Often the older a myocardial infarct gets the harder it is to diagnose it electrocardiographically.

APPEARANCE OF MURMUR

"The crux of this whole case is that about two and one-half hours after he came into the hospital he had a precipitous change for the worse which was characterized, in addition to the pain and shock and dyspnea, by the appearance of a murmur, and this murmur is well documented. It is described as harsh, apical, and systolic. No thrill is mentioned, and so I come to the conclusion that there must not have been a thrill, though I am not necessarily justified in that. It doesn't say that there was no thrill, it just doesn't say that there was one. I say that there was no thrill for this discussion.

"He went progressively downhill with heroic therapy to no avail, and died in the course of about six hours after the appearance of the murmur. It seems clear, or it seems extremely likely, that this man had a myocardial infarct probably three days before admission and that it was a complication of this which resulted in his precipitous deterioration on September 30. It seems most likely that something broke—that something ruptured in his heart. The question then for the rest of the discussion develops into a consideration of what might have broken and what it was that did break.

"Anything might have ruptured, including the aortic valve which would have produced a different murmur and is not likely to complicate a myocardial infarct. Rupture of the ventricle itself would not be expected to be associated with a murmur or such a long course but would more likely be associated with diminishing heart sounds and rapidly progressing cardiac tamponade. Rupture of the coronary sinus has been described, too. Chordae tendineae, papillary muscles, or interventricular septum are the three possible sites of rupture that have to be discussed as the most likely basis for his terminal event. Now all of these are exceedingly rare. I couldn't find any basis to compare them accurately in terms of incidence in myocardial infarcts, but did get some figures which are pertinent.

"First, let's consider rupture of chordae tendineae, which doesn't seem particularly likely, but which should be dispensed with. Out of 2,400 autopsies reviewed in 1944 at the Peter Bent Brigham Hospital there were 11 instances of rupture of the chordae tendineae.[1] Of these, four had subacute bacterial endocarditis and seven had trauma or some sort of disease of the mitral valve and/or its chordae. Most of the ruptures were described as spontaneous, which simply means that the patient was doing very well at the time and ruptured a chorda or some chordae with the onset of a murmur. This murmur was usually apical, harsh, and loud, but the consequence of the rupture of chordae are not nearly so dramatic as were described in this CPC protocol.

"These patients are recognized characteristically among our older group of patients. They go back to the doctor who has been following them all along, and he finds that they have a murmur which they didn't have before. This is supposed to be the prime indication of a ruptured chorda. Patients with this set of circumstances may go for many weeks or months before they begin to go into heart failure as a complication of mitral regurgitation. This simply amounts to an unusual means of producing mitral regurgitation. The function of the chordae and the papillary muscles normally is to hold the valve leaflets down so that during systole they don't balloon back into the left atrium and allow the blood to be regurgitated. This man doesn't fit this set of characteristics at all. He had a precipitous complication of myocardial infarction, and chordae tendineae don't usually break as a result of myocardial infarction. It is the papillary muscle that is much more likely to go as a result of infarction.

PAPILLARY MUSCLE RUPTURE

"Rupture of the papillary muscle is much more likely here, and my chief reference to this subject is a review by Dr. Askey, which was published in the *American Journal of Medicine* in 1950.[2] He found that by that time a total of only

37 cases of rupture of a papillary muscle had been recorded. One report described two cases in 6,000 autopsies and another three cases in 14,000 autopsies. He added two which were observed by one man in the course of a year in two private hospitals, I believe. It may be possible—I am sure it is possible—to miss it at autopsy, but I suspect that very few are missed and that rupture of a papillary muscle is truly a very rare occurrence.

STATISTICS

"Statistics tell us that the rupture almost always involves the mitral valve, and usually the posterior papillary muscle. The anterior one is involved sometimes, but only two cases of the 37, I believe, involved the right ventricle. Both of these for some reason were consequences of periarteritis or necrotizing arteritis of some sort. Some of the others have been the result of subacute bacterial endocarditis, abscesses, or trauma, and many of them have been idiopathic, or, as the papers describe them, spontaneous. One group was described as due to syphilis and one to ulcerative endocarditis, whatever that means, but most of them are a result of myocardial infarction, probably 60 per cent or 75 per cent and maybe 90 per cent depending on one's interpretation of what is presented.

"The clinical picture of a rupture of a papillary muscle is pretty much what our patient for today had. Collapse is the main thing. The patient has a sudden change in status, associated with pain, which is interpreted as re-infarction, extension of infarction, pulmonary embolism, or something like that, and goes into a state of circulatory collapse which is characterized most frequently by pulmonary edema, left sided failure, and the onset of a murmur. This murmur is characteristically loud, harsh, and maximal at the apex in systole, though many of them have been described as being in diastole and a few have been described as sounding like friction rubs. Able people have described these patients as having developed friction rubs and the murmurs were not recognized.

VARIATIONS OF MURMURS

"The etiology of such unusual noises presumably is associated with the broken end of the papillary muscle flipping around and hanging in the remaining chordae tendineae and producing turbulence as the blood rushes back and forth over it. Remarkable variations of these murmurs have been described. Possibly about 50 per cent of those recognized at autopsy that had been examined adequately beforehand had no abnormal sounds and very few had thrills. One of the reviewers described none of those due to myocardial infarction as having a thrill whereas some due to other causes did have thrills. Well, this is difficult to interpret as making good sense, but it is an observation and presumably a statement of fact. The EKG is not characteristic. It is usually abnormal, of course, because the patient has got bad heart trouble to begin with.

"Survivors who last beyond a few days are very few. One lived 20 months and another six months, but the large majority die within less than 10 hours after onset, and the classic time for onset is three days after a myocardial infarct. The average time for rupture of a papillary muscle is three days after the assumed time of myocardial infarction. This, of course, fits our patient exactly. He died six hours after the appearance of the murmur which was three days after what I suspect was the time that the infarct occurred.

INTERVENTRICULAR SEPTUM

"In 1923, Braunn diagnosed a rupture of a papillary muscle on the basis of clinical findings in a patient who had had severe chest pain the day before. The patient came to autopsy and didn't have a ruptured papillary muscle at all but a perforated interventricular septum. Perforation of the interventricular septum as a complication of myocardial infarction wasn't recognized in 1923 even though it had been recognized as a pathologic entity for many, many years, because in 1923 myocardial infarction wasn't generally recognized as a clinical entity. Nobody knew, or very few knew, what a myocardial infarct was. A textbook of electrocardiography written in 1924 that I have downstairs doesn't mention the subject.

"The murmur following rupture of the interventricular septum can sound exactly like the one described here, and this is the other chief differential. Again it is hard to get statistics that relate to the others in a very clear way, but it is a standard statement repeated in many series that ruptures of ventricular myocardium occur in something of the order of 8 per cent of all myocardial infarcts, and of those something like 25 per cent, or 2 per cent of all myocardial infarcts, involve rupture of the IV septum. A review of the literature shows that in 1956, 75 cases had been reported.[3] Like rupture of a papillary muscle, this almost always follows myocardial infarction, the IV septum being involved to some extent in from 60 per cent to 70 or 80 per cent of infarcts depending upon the series one reads and the criteria used for assessment. It can follow abscess, it can follow SBE, it can follow trauma, but none of these seems pertinent in our patient.

"Perforation of the interventricular septum is usually near the apex in the muscular septum and may vary anywhere from pin-head in size to several cm, and one can't tell on the basis of how loud the murmur is how big the hole is going to be. The clinical picture again is characterized chiefly by rapid deterioration in a patient who has had a recent myocardial infarct. The mean time for rupture of the papillary muscle is three days and the mean time for rupture of the ventricular septum is around a week.

CHARACTERISTICS OF MURMUR

"The patient who ruptures the interventricular septum develops a loud murmur which may be at the apex but which is much more likely to be medial or left parasternal in the 3rd, 4th, and 5th interspaces. It also is systolic in time, is transmitted to the right, is associated with a thrill in a perhaps 50 per cent of cases, and some such murmur is present in something of the order of 96 per cent of all acquired IV septal defects which have been studied adequately. These patients are much more likely to have a murmur than are those who have ruptured papillary muscles. The electrocardiogram may show anything. A few of these patients have survived. It seems to me that I have read reports of patients who have survived myocardial infarcts and in whom the presence of ventricular septal defects has been demonstrated by cardiac catheterization. These must be very rare indeed. Most patients don't live more than a few days. The average survival time in one series was 7.4 days.

"Those are the things which I think should be considered chiefly: Ruptured chordae tendineae, ruptured interventricular septum, and ruptured papillary muscle, all as complications of myocardial infarction. In summary: I think he had coronary atherosclerosis with myocardial infarction which may have been subendocardial. Death was due immediately to rupture of something as a complication of myocardial infarction. Had it been an aortic cusp, he would have a high pulse pressure and a diastolic murmur over the aortic area, which wasn't described. If the interventricular septum had ruptured, the systolic murmur should have been more pronounced medially than his and it should have been associated with a thrill. The ventricle itself shouldn't have produced a murmur, and he should have died much more quickly. Chordae tendineae almost always follow subacute bacterial endocarditis, diastolic murmurs and thrills are common, and death shouldn't occur so quickly. A ruptured papillary muscle fits the picture perfectly. I choose the papillary muscle."

Dr. Langford: "Are you doing that because of pulmonary edema or just doing it because of the murmur?"

Dr. Blake: "Because of the apical location of the murmur, pulmonary edema, rapid deterioration, and the absence of a thrill. All of these things could be present with an interventricular septal defect, but are more characteristic of a ruptured papillary muscle."

Dr. Langford: "One other thing, I believe you said that in 1923 myocardial infarction wasn't recognized."

Dr. Blake: "I said it wasn't recognized by many people."

Dr. Langford: "Don't you mean recognized electrocardiographically? I mean clinically."

Dr. Blake: "It was known in 1923, all right. Herrick's paper was in 1912, I believe, but electrocardiographically it wasn't known. Electrocardiographically it wasn't being recognized in 1923."

Dr. Brunson: "Thank you, Dr. Blake. This case, as you have already pointed out very aptly, I think, is a good teaching case. That is the major reason it was selected for discussion, because of the interesting differential diagnostic possibilities, which include that of rupture of the interventricular septum, the chordae tendineae, or a papillary muscle. And you are quite right in stating that death was associated with rupture of something. Dr. Kenneth Coffelt will tell us what was ruptured."

AUTOPSY REPORT

Dr. Coffelt: "The heart was enlarged with a weight of 545 grams. There was a rather marked amount of subepicardial fat. The coronary arteries were traced and found to be moderately tortuous. There was a slight amount of atherosclerosis in both the right coronary and in the anterior descending branch of the left, but no evidence of thrombosis or occlusion was found. However, on tracing the circumflex branch of the left coronary artery, it was found to be completely occluded at a point just proximal to the left marginal branch. On opening the heart and sectioning the myocardium a recent infarct was found in the muscle of the left ventricle in its lateral and posterior portion. The infarct was light brown with mottled areas of dark red slight hemorrhage. The margins of the infarct were rather indistinct.

"Examination of the endocardial surface revealed that one of the papillary muscles on the left surface of the left ventricle was ruptured and the upper portion of the papillary muscle attached to the chordae tendineae was tangled and twisted

in the attached chordae tendineae. An old greyish-white firm healed myocardial infarct was seen in the lower one half of the anterior portion of the interventricular septum which measured approximately 2.5 cm. in greatest dimension. The only other pertinent finding was marked pulmonary edema. Both lungs were essentially three times normal weight. The right lung weighed 1,225 grams and the left lung weighed 1,090 grams."

RARE COMPLICATION

Dr. Brunson: "Although this case itself is one of a rare complication of myocardial infarction, it is somewhat a little bit more on the rare side because this was an anterior papillary muscle, and as you mentioned, most ruptures of this type involve the posterior papillary muscle. One really wonders why this condition doesn't obtain more frequently with myocardial infarction because the vascular supply to the papillary muscles is at best somewhat meager. The anterior muscle receives only one branch from the anterior descending branch of the coronary artery, while the posterior muscle, which is more frequently involved, is said to receive two branches from the right coronary artery. It is possible that one is dealing with intrinsic small vessel disease in the papillary muscle. At any rate, although this location is a frequent site of ischemic necrosis, infrequently does it rupture.

"This patient is also of interest to us because of his previous cardiac episodes, and it is one of the few cases that I have seen in which one can correlate fairly well history with morphologic changes in the heart. Dr. Coffelt described a greyish-white scar in the myocardium, and we take this to represent his first episode of apparent myocardial infarction. Microscopic sections from this area show that a great deal of the muscle has been destroyed. There are islands of apparent viable muscle which lie in a field of intensely acidophilic collagenous tissue or scar tissue. Without the aid of a history, one would estimate that this is probably at least a year old. Some small vessels are still present in the scarred areas, and it may be assumed that these gradually would have regressed over a period of time leaving an almost completely avascular scar. Also, there are still occasional macrophages which contain hemosiderin, and those are said to persist for at least as long as six months and perhaps longer. So we think this would fit in fairly well with his previous infarction some 16 months prior to this admission.

"Now he also had a history which would suggest a new myocardial infarct in May, about three or four months prior to his demise. Other microscopic sections show a somewhat more recent area of necrosis and reactive inflammation. The lesion is characterized by accumulations of pigment-laden macrophages, abundant capillaries, and loose connective tissue. It seems reasonable to believe that this lesion is less than six months' duration and probably would fit better into a category of some three to four months' duration.

"This resolving area of necrosis would probably fit in fairly well with his episode in May 1959. Microscopic sections from the papillary muscle indicate that this lesion probably is more than 48 hours old, but not more than five days old. There are aggregates of acute cellular elements all around the edges of necrosis, and these cells for the most part are polymorphonuclear leukocytes. So one would be inclined to think that this lesion is of reasonably recent duration, particularly since there is no evidence at this time of macrophages, or appearance of hemosiderin. That the muscle is necrotic is evidenced by the disappearance of muscle nuclei, loss of striations, and beginning appearance of hemogeneity.

"Our final impression would be that this man has had three episodes of myocardial infarction, one certainly at least a year ago, one probably three or four months ago, and then one that is less than a week, probably within three to five days duration. His demise appears to have been brought about by rupture of the anterior papillary muscle, with congestive failure and acute pulmonary edema. Do you have any additional comments, Dr. Blake?"

Dr. Blake: "None except that the question of whether the infarcts were subendocardial still has not been answered."

Dr. Brunson: "Well, I wasn't aware that this controversy existed. It seems to me that infarcts more often involve the endocardial surface than they do pericardial or epicardial surfaces, and the infarct which involves both surfaces is less common in my experience than one which involves either one surface or the other." ★★★

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SOCIOECONOMICS

Medical Legislative Activity And the Forand Bill

GEORGE E. TWENTE, M.D.
Jackson, Mississippi

The Forand bill, a measure which would allow the federal government to provide medical care for the aged through the Social Security program, has been deterred by the determination of American physicians to preserve the free enterprise system.

Dr. Twente challenges the bill on the ground that it limits free choice, undermines voluntary prepayment plans and health insurance, and does not provide aid for the majority of indigent senior citizens. The passage of the bill, Dr. Twente says, could lead to bankruptcy of the Social Security program, higher taxes, shortages of hospital beds, deterioration of the doctor-patient relationship, the end of community hospital support, and the discouragement of family responsibility for health needs of the aged.

Dr. Twente advocates the continuation of voluntary prepayment and insurance plans and the development of local health care programs by non-federal means. "Health care responsibility begins with the individual, goes then to the family, and at best, goes no farther than the community, county, or state," he says.

TWO FACTORS HAVE FIGURED prominently in preventing enactment of the Forand bill: The determination of American physicians to provide quality and quantity medical care in a free-choice, free-enterprise climate and the efficient legislative mechanisms of medical organization. This is not to say that medicine cannot lose because it has not won. Neither is it to assume defeat of Forand proponents because as yet they have not lost.

Every physician with the slightest interest in the American system of health care, everyone who believes in free enterprise as opposed to the planned economy of socialism, every doctor who feels that incentive and responsibility should motivate the individual, and, finally, everyone who earnestly desires quality and quantity medical care must understand the what and how of the most serious problem to face the medical profession in the history of its organization.

LEGISLATIVE MECHANISMS

Both the American Medical Association and the Mississippi State Medical Association are governed by their members through Houses of Delegates. In fixing basic policy, these bodies establish positions with respect to scientific and socioeconomic issues. To manage their respective affairs, each has a Board of Trustees in whom are vested those powers and authorities generally accruing to corporate boards of directors.

As regards legislative interest, both A.M.A. and M.S.M.A., through their Boards of Trustees, have established councils charged with legislative activity in behalf of the associations. In A.M.A., this body is known as the Council on Legislative Ac-

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Member, Council on Legislative Activities, American Medical Association.

Read before the State Medical Legislative Conference, Mississippi State Medical Association, Jackson, November 12, 1959.

tivities. The Mississippi association's counterpart body is known as the Council on Legislation.

Each legislative council studies aspects of medical legislation, sometimes considering as many as 400 bills having medical implication during a single session of the Congress. At state level, the Council on Legislation performs a similar service as regards regular sessions of the legislature. Apart from routine research and inquiry, each group considers needs for new legislation based upon actions of the House of Delegates or other previously established policy.

Often, each group arranges for physicians to give testimony before appropriate committees of the Congress or the state legislature. Additionally, these legislative bodies communicate directly with the membership using various means to inform physicians of pending, proposed, or needed legislation. On some occasions, they request individual action by physicians in communicating with members of the Congress or the state legislature.

It should be understood that neither the A.M.A. Council on Legislative Activities nor M.S.M.A.'s Council on Legislation undertakes a course of action on its own initiative. Each proceeds under continuing scrutiny of its Board of Trustees, carefully observing previously established policies and the desires of a majority of the membership. It might be added that the work of these groups is an unremunerated labor of organizational love.

THE FORAND BILL: DANGER AHEAD

The Forand bill has deep meaning for every doctor of medicine. It was first introduced in the 85th Congress in 1957 and was never reported out of committee. On February 18, 1959, Rep. Aime J. Forand (D., R.I.) again introduced his bill in the First Session of the 86th Congress where it was designated H.R. 4700. Except for minor changes in the schedule of tax increases and in required qualifications for physicians performing surgery, the present Forand bill is virtually identical with the original version which was known as H.R. 9467, 85th Congress.

The Forand bill and its many Forand-type counterparts introduced in both the House and Senate propose to amend Title II of the Social Security Act to provide hospital, nursing home, and surgical services for persons eligible for old age and survivors benefits. Except for care in a tuberculosis or mental hospital, the proposal would furnish services, drugs, and appliances to any bed patient in semi-private hospital accommodations or nursing home, laboratory and staff services, ambulance service, and use of operating rooms for a total of 120 days per year with a maximum of 60 days hospital care. Professional services would be provided under a government-devised fee schedule.

PHYSICIANS LIMITED

Under the initial version of the bill, physicians rendering care were limited to those certified by the American Board of Surgery or Fellows in the American College of Surgeons. These restrictions have been deleted in the present form, but the surgeon must be a member of an attending surgical staff of a fully accredited hospital or possess the qualifications initially prescribed.

Only those hospitals and nursing homes which have entered into agreements with the government would be eligible to furnish services to beneficiaries of the program. The amount of payment under such agreements would be determined by the government on a basis of cost analysis. Agreements with physicians would be entered into between their representatives and the federal government, utilizing as contractor any association or organization of doctors acceptable to the federal administrative agency. Physicians, hospitals, and nursing homes who did not enter into agreements with the government would not be compensated for care of beneficiaries except in emergency situations.

As presently proposed, some 15 million Americans would become eligible for care under the provisions of the Forand bill. There is much disagreement as to the cost of such a program, but authoritative estimates place it in the neighborhood of $2 billion per year at present health care cost levels. Costs would increase as more persons became eligible for federal medical services and as costs of providing the care increased. The expense would be unbelievably great and could adversely affect the retirement security of millions whose basic dependence is upon Social Security.

Mr. Forand proposes that program costs be paid by increasing Social Security taxes on employer and employee alike. The present version of this legislation provides for taxes up to 9 per cent of payroll on a wage base of $4,800 in about an eight-year period from enactment. Very likely, even this unbelievably high Social Security tax would not cover the cost of the program. Historically, cost estimates for compulsory health insurance are too low. This has been true in Great Britain.

The vast majority of Americans within the Forand-eligible classification of old age and sur-

vivors beneficiaries do not need federal medical care. It is reliably estimated that only about one-fifth are indigent and these can be cared for under realistic state, county, and community programs.

NO FREE CHOICE

Although Mr. Forand and other proponents of this legislation loudly proclaim full free choice of physician, hospital, and nursing home by eligible recipients under the legislation, this is not true. Free choice is deceptively limited since all providers of health care must enter into such agreements as well as those who are found unqualified by the government.

Forand-type legislation will undermine voluntary prepayment plans and health insurance by gradually replacing them. The voluntary prepayment plans and health insurance industry have proved their ability to meet the extensive needs of our growing population and almost half of all persons over age 65 are now covered by some form of private plan. The Health Insurance Association of America estimates that coverage of the aging will reach 75 per cent by 1965 and 90 per cent by 1970. With progress of this nature easily predictable and virtually certain to come, the legislation is not only unnecessary but also totally uneconomical.

Paradoxically, most of our indigent citizens are not under the Social Security system and, therefore, would receive no assistance under the Forand proposal. This fact, however, is not a major deterrent to proponents of the program who are really interested only in this beginning wedge for total federal health service in our nation.

FALSE 'NEEDS'

Although the American Medical Association and most state medical associations have achieved astonishing progress in meeting health needs of the aged, there still is not enough conclusive data to warrant any drastic, politically-inspired proposal of this nature. Obviously, it is unsound and impractical to attempt any sweeping solution for a problem which has not yet been defined. This was emphasized in M.S.M.A.'s testimony before the House Committee on Ways and Means last July in behalf of our state medical association. At that time, it was stated that ". . . in our judgment, H.R. 4700 is another step in the piecemeal movement toward universal federalism. We feel that its concept ignores local potential while offering no solutions which are unattainable by non-federal means."

Further, the statement affirmed that ". . . we do not agree with proponents of this legislation either as to their appraisal of unmet needs or the means by which such might be fulfilled. We believe that the proposal would fail in its stated purpose while consuming huge sums of tax dollars. We feel that it would seriously impair both the quality and quantity of medical care."

Although there are many more, a dozen reasons validate medical organization's position in opposing this unnecessary and unsound legislation. It could bankrupt the Social Security program and jeopardize the basic retirement income of millions of Americans. It would mean higher taxes and less take-home pay. Demands by others for similar benefits can lead only to total socialization in health services and the principle of government regulation of professional fees, wages, and health care prices would have then been introduced in the United States—probably to stay.

DESTRUCTIVE PROGRAM

Communities would be threatened with a shortage of hospital beds. In Saskatchewan, Canada, where a Forand-type program has been effective for some time, hospital utilization by those persons aged 65 and over is three times greater than in the United States. Many aged persons would become unduly concerned with their health because elimination of personal financial responsibility means unnecessary seeking of health care for trivial and imaginary conditions.

The Forand proposal is hasty, ill-conceived legislation based on inadequate knowledge. The government would control so-called standards of hospitals and surgical services as well as the conditions under which services would be provided. The personal relationship between the doctor and his patient would be seriously impaired as beneficiaries under the law are restricted in their choice of hospital and doctor.

Community incentive to support and build hospitals would be curbed if not halted. The task of providing hospital and surgical services for the aged can and must be provided through a free-choice, free-enterprise system. This potential is too certain and powerful to be ignored.

Finally, Forand-type legislation can only discourage families from assuming responsibilities which are properly theirs. It should be reiterated that health care responsibility begins with the individual, goes then to the family, and, at best, goes no farther than the community, county, or state. The task of the medical profession is to make the care available but only under those circumstances which warrant its quality and quantity.

To friends and colleagues in the hospital industry, medicine says that this is your problem as much as ours. Mississippi physicians salute and applaud the Mississippi Hospital Association for its decisive action in opposing the Forand bill while its national affiliate, the American Hospital Association, wavered and stumbled before making up its mind to follow a similar course. Interests of each group in behalf of the patient are inseparable.

Dr. David Allman, the immediate past president of the American Medical Association and a member of the A.M.A. Council on Legislative Activities, tells of an interesting conversation overheard on Forand legislation between a hospital administrator and a hospital trustee. The telling of the story proves that it did not and almost could not happen in Mississippi.

The administrator contended that the Forand bill, if enacted, would make full payment to his hospital for care of welfare patients and eliminate his operating deficits. The trustee, a wise businessman, placed his hand on the administrator's shoulder and said, "My friend, enactment of the Forand bill would only lead to placing the entire population under national compulsory health insurance. If this happens, let me remind you that we trustees and administrators can fold our tents and hand over our hospitals to the federal government.

"In England," he continued, "there are 3,200 hospitals with 477,000 beds. Since 1946, these hospitals, their land, and their equipment have been vested in and belong to the Ministry of Public Health."

Neither epilogue, clarification, nor amplification of this story is required. Mississippi medicine has faith and confidence in the splendid men and women who operate our hospitals in Mississippi. Among physicians, there are respect and admiration for the leadership of the Mississippi Hospital Association and the Mississippi Association of Hospital Governing Boards.

M.S.M.A.'S VIEW

The closing paragraphs of M.S.M.A.'s testimony in opposition to the Forand bill at Washington last July summarized M.S.M.A.'s position and the dedicated viewpoint by stating that ". . . we dislike the necessity of having to interpret our position and personal dedication in terms of so many hundreds of thousands of patient days of cheerfully given, unremunerated professional services. We are reluctant to emphasize that much of our positive program predates present issues by more than a decade.

"We reaffirm our confidence in voluntary prepayment and insurance plans and in the merit of full development of local health care programs for the indigent by non-federal means. In opposing H.R. 4700 and all similar measures for the reasons stated, the Mississippi State Medical Association pledges its total energy and resources toward bringing quality and quantity medical care to all citizens of our state." ★★★

710 North State Street

MOSTLY MAYO

An elderly passenger on the Chicago to Rochester flight was obviously uncomfortable because of a troublesome head cold. Seated next to him was the proverbial talkative traveler who had all the answers.

"Yes, sir," the bubbly seatmate exclaimed, "I had a cold twice that bad last week but I cured it with my own personal treatment of corn meal poultice, whiskey, and castor oil."

The miserable sniffler nodded affably as his companion continued interminably. Just before landing at Rochester, the self-appointed practitioner gave a parting injunction.

"Hope the cold gets better and it will if you stick to my advice. By the way, my name's Hartman."

"Glad to meet you, sir," came the weary response, "I am Dr. Charles Mayo."

Hocus Pocus in the Courtroom

Reprinted from:
JOURNAL OF AMERICAN INSURANCE

Misuse of demonstrative evidence to win excessive jury awards is more trick than fact, says the responsible Journal of American Insurance. Trial by blackboard, price tags for pain, and slanted emotional appeals too often result in the big payoff by juries. The American insurance industry accepts its lawful obligations to satisfy just claims but feels that oversize judgments adversely affect all policyholders.

Physicians will recognize the obvious relationship of the personal injury suit technique discussed to that sometimes employed in professional liability contests. Because of this and the fact that injury suits are more often decided on medical rather than legal considerations, Journal M.S.M.A. presents this pertinent and timely article, acknowledging with appreciation permission from the Journal of American Insurance to reprint it.

EACH DAY OF THE TRIAL the plaintiff's attorney placed a package on the table in front of the jury. It was wrapped in butcher's paper, and gradually, with suppressed horror, the jurors realized it was the size and shape of a leg.

Thus began their subjection to a masterfully effective misuse of demonstrative evidence for the purpose of arousing their sympathy to win a large personal injury award.

PLAINTIFF: YOUNG, PRETTY

Plaintiff in this lawsuit was a pretty young matron who had been hit by a streetcar and lost a leg. Her lawyer didn't mention the package, but the tension grew each day. Finally his moment came. He spent five suspenseful minutes undoing the paper. There was a final dramatic rip, and he held aloft a leg. The jurors gasped before they realized it was an artificial limb.

Then came the attorney, thrusting the leg at the jurors, dropping it in their laps, urging them to touch it and then visualize what it would mean to the young woman to go through the rest of her life wearing it.

"Feel the warmth of life in the soft tissues of its flesh," he urged. Then, as one juror drew back in distaste, "Don't be alarmed . . . my client is no longer frightened." He wound up his emotional summation; the jury deliberated a few minutes, then brought in a verdict of $100,000.

Once again the effectiveness of an emotional appeal on a jury had been demonstrated. With such use of demonstrative evidence in personal injury cases some 6,000 members of the National Association of Claimants' Compensation Attorneys have been attempting to win exorbitant jury awards for plaintiffs—and for themselves, since their fees amount to one-fourth to one-half, sometimes more, of the verdicts.

Partly as a result of their efforts, jury awards for personal injuries have outdistanced all other items in the cost of living in many areas of the U. S. They rose 204 per cent in ten years in Cook County, Illinois, for example: 270 per cent in New York State, up to 486 per cent in some parts of the state.

EXCESSIVE AWARDS HURT PUBLIC

Excessive jury awards are hard on the public, which ultimately pays for most of them, Every passenger of the railroads, city transit systems and other common carriers pays higher fares, for examples, to cover big damage claims against the carriers. Motorists pay more for their auto insurance, and still, despite rate increases, insurers pay out some $300 million a year more in claims than they collect in premiums—a total of nearly

From the Journal of American Insurance 36:5-7 (Jan.) 1960. Copyright 1960 by American Mutual Insurance Alliance, 20 N. Wacker Dr., Chicago 6, Ill. Reprinted by permission.

$2½ billion annually. These losses result partly from increase in the number of accidents and in costs of medical care, auto repair and replacement, but partly, too, from excessive jury awards.

EVIDENCE MISUSE DEPLORED

No reliable insurance company wants to avoid paying a legitimate claim; to pay is its obligation. But neither does it want to pay more than is justified under the law; avoiding that also is its obligation to its policyholders. This is why insurers deplored the misuse of demonstrative evidence to achieve excessive awards.

The public deplores and resents it too, recent experience in many states and cities has shown. Where citizens have been made aware of the use and effects of demonstrative evidence, and what it costs them, they have tended to stop letting it influence them unduly and to return just and realistic awards based on facts, not on sympathy aroused by a clever attorney's Hollywood-style histrionics. Some courts, too, have begun to restrict the use of demonstrative evidence.

Basically, the term means simply evidence addressed to the senses of the judge or jury—something they can see, feel, smell or taste. It is widely used in criminal trials—showing the alleged murder weapon or a photo of the scene, for example. Properly used, it is helpful in civil cases too, both sides can well make use of maps, charts, diagrams and other visual aids to help the judge or jury "get the picture." It is when demonstrative evidence is misused, to arouse emotions and prejudices in a jury and get its sympathy for one side, that it is improper and unjust.

Gory color photographs of the alleged injuries, for example, will remain in the minds of a jury and arouse sympathy for the plaintiff—even if competent medical testimony shows that the injuries in fact were far less serious than the bloody pictures would indicate. A binge of emotional oratory while brandishing a skull or skeleton or holding out an artificial limb for them to touch will arouse more feeling in jurors than words alone, regardless of the merits of the argument.

Wheeling a plaintiff into court in bandages or braces is the best way to arouse sympathy—even if it means putting a recovered plaintiff back into a wheelchair or cast, or keeping him there, for the trial.

One of the most effective, and most insidious, techniques of demonstrative evidence is the use of a blackboard to implant figures—large ones—in jurors' minds. The plaintiff's attorney writes down, in the jury's presence, dollars-and-cents amounts sought for medical care, loss of earnings, pain and suffering, and so on.

'PRICE TAGS' SET ON PAIN

Some of these figures can be proved, or computed with some degree of reason, but some—usually the largest ones—cannot. There are no set "price tags" that can be put on an eye, or an arm, or a leg, for example, and by no conceivable method can anyone compute a standard valuation for pain and suffering. Compensation was never intended as and couldn't possibly be a substitute for pain or loss of a limb.

Yet plaintiffs' attorneys often succeed in implanting their own high valuations in jurors' minds by continually referring to them and particularly by leaving them on the blackboard for a time.

Though by law the jurors are charged with determining a fair and reasonable award based on the facts in each individual case, they can, by such methods, be influenced into adopting the attorney's figures as their own. As with subliminal TV advertising, the suggestion can be made so subtly that jurors actually are unaware the technique has been used.

$1,000 A MINUTE! FAIR COMPENSATION?

Plaintiffs' figures always are high, naturally. Everyone would agree that no amount of money can really compensate a person for pain and suffering—but to hang on a price tag of $10 a day, or $5 an hour, or even $1,000 a minute, as some attorneys have done, is certainly unfair and unrealistic. Yet as the attorney dramatically re-enacts the anguish his client allegedly endured, and will endure, and breaks this down by the day, and the hour, and the minute, it is not difficult for him to convince the jury that an astronomically high figure is not only reasonable but even inadequate to compensate for such suffering. Realistic definitions of "fair" and "reasonable" are forgotten.

One method that has been demonstrated to convince a jury that a given damage figure is inadequate: Offer the jury three $1,000 bills, but stipulate that any taker must first lay his right wrist beside the bills and let the lawyer smash it repeatedly with a sledgehammer until a compound fracture is produced. "Would you do that?" the plaintiff's attorney asks each juror. "Would you? Or you? Or you?" Even for $3,000, no one steps forward. Thus is the jury persuaded that $3,000 is a pitifully small award for a person who suffers such an injury.

Recognizing the effects of such misuse of demonstrative evidence, courts in several states have moved to halt or restrict it. Pennsylvania courts for years have barred the blackboard method of breaking down damages, and beginning with the New Jersey Supreme Court's ruling against it in the case of *Botta v. Brunner* last February, several other states have taken the same view. As other courts review similar cases, it is hoped they too will help curtail the use of unfair tactics to achieve excessive jury awards.

TO EVERY MAN—A SQUARE DEAL

As Samuel Johnson once observed, "It is easier to be beneficent than to be just." But justice demands—and all society will be the better for it—that the courts and every individual juror keep in mind the creed Theodore Roosevelt put into words in 1904: "To see to it that every man has a square deal, no less and no more." ★★★

FORAND SEEKS CHANGE

The Forand bill would change the traditional Social Security concept of *cash* benefits to one of *service* benefits because the government would guarantee a service instead of an amount of money. Apart from aspect of providing compulsory coverage to millions whether they want it or not, the government promises something it cannot in itself provide—medical care.

An Overcrowded Earth: Possibility or Probability?

JOURNAL M.S.M.A.

Special Feature

Population control is one of the biggest issues of modern times. Population experts say that unless something is done soon, space will be at a premium in another six or seven hundred years. Neo-Malthusians predict that poverty and hunger are inevitable while others say technology will find a way to produce new food products and sources of energy. Some leaders advocate birth control as a solution, but many groups oppose such a program and the "perfect contraceptive" has yet to be discovered. Journal M.S.M.A. has rounded up recent statistics and information on this timely subject in this special feature.

According to population experts, man is going to find himself in a "standing room only" situation in another six or seven hundred years if something is not done to halt the current "population explosion."

THE EXPERTS PREDICT

The World Health Organization predicts: "With the present rate of increase, it can be calculated that in 600 years the number of human beings on earth will be such that there will be only one square meter (10.74 square feet) for each to live on." Said one square meter would include arctic waters, deserts, and mountain tops.

Dr. Harrison Brown, geochemist at the California Institute of Technology, estimates: "At this rate, in 730 years human beings will cover the land areas of the earth and will be so tightly packed that each of us will be able to own, on the average, estates which will be one square foot in area."

Until about a century ago there was no real concern over an overcrowded earth. Rev. Thomas R. Malthus (18th century English economist who believed human population inevitably increases faster than the means of subsistence and hence poverty and distress are unavoidable) was in utter disrepute.

Then begin the age of scientific medicine. Medical pioneers such as Pasteur and Jenner started the campaign against infectious diseases. The new knowledge and techniques led to rising birth rates and decreasing death rates.

As a result of medical advances, the world's population finally reached a billion in 1830—after fifty centuries of civilization. By 1920, less than a century later, man's numbers doubled to two billion. As 1960 began, the world's population stood at 2.8 billion with population experts looking for the fourth billion by 1980. The fifth, sixth, and possibly seventh billion marks will be passed by the turn of the century, say the specialists. If the present rate of increase (1.6 per cent) continues, earth's numbers will begin doubling every 40 years, billions begat by billions in a chain reaction population explosion.

NEW FOODS: ALGAE, PLANKTON

It has been said that there is no need to be concerned because marine substances such as algae and plankton can be harvested for additional food products and boundless energy can be obtained from the sun. Even if technology should thwart the Malthusian theory and keep pace with population growth by tapping unused resources such as vegetable substances in the sea and solar and atomic energy, the crowded conditions would make the present standard of living impossible. Another life supporting planet would not completely solve the situation—a population which doubles itself every 40 years poses extreme sociological, economical, and psychological problems no matter how much space is available.

In the technically advanced countries, technology has generally grown along with the popula-

tion. The industrial sciences have developed side by side with medicine to produce a higher standard of living. As each disease was conquered, new means of providing food, clothing, shelter, and jobs for the growing citizenry were discovered. There have been strains—the present school shortage is the most pressing in the United States—but for the most part the economies of the industrial nations have expanded to provide for their growing populations.

ECONOMY CANNOT KEEP PACE

The story is quite different in the so-called "underdeveloped" countries. Their already struggling economies are unable to keep up with the mushrooming populations resulting from modern medical know-how. Ceylon is a prime example. For centuries, the great killer in the big island nation at the tip of India was malaria. The spraying of once malarial areas after World War II resulted in 33 per cent population increase (from 6.9 million to 9.1 million) within little more than a decade. Among the rapidly multiplying populations of Latin America, Africa, and Asia, a medical investment of 14 cents a citizen has been known to cut a country's death rate by 50 per cent.

At this growth rate, it is impossible for these countries to maintain their present standard of living much less raise living conditions. The great danger of mushrooming populations as far as the democratic nations of the world are concerned is that oppressed peoples seeking a better way of life may not be content to wait on the slow but sure methods of democracy. They may turn to the more expedient form of dictatorship, most probably communism, where relief is quick—and shortlived.

In his original writings, Malthus predicted that only war, disease, and famine would invalidate his theory. Later, he added moral restraint. Today's leaders have come up with one more possibility: population control.

Population control is not a panacea. No one has discovered a contraceptive that can be easily used and distributed. And there is still great question whether all the peoples of the world will psychologically and morally accept the principles of population control.

The contraceptive, apart from religious and moral aspects, is ultimately a medical problem. However, it is necessary to consider religious and national attitudes to thoroughly evaluate the world population problem.

Among religions, there is great variance of opinion especially as expressed by great religious leaders. Some sects are vocally in favor of birth control, others are unconditionally opposed, and many have no official belief. There is also division of opinion within many religions.

The situation is much the same with nations. Red China, where enough little Chinese are born each year to furnish another Canada, has been on both sides of the birth control fence. In 1956, with a population estimate of 650 million, the Red Chinese embarked on a nationwide birth control project which utilized everything from modern devices to the favorite oral contraceptive of Chinese herbalists: live tadpoles. Then in May 1958, the campaign was unexplainably called off. However, contraceptives are still manufactured in China and are widely available, which in a Communist society is equivalent to official sanction.

In the Soviet Union, there is presently no campaign for or against population control. Information is available from doctors and contraceptives are on sale. However, the government awards the Order of Maternal Glory to mothers of seven or more children and grants aid to large families.

The most active birth control program at present is being pushed in Japan. Threatened with overwhelming and ever increasing numbers for its small islands, postwar Japan adopted the slogan "Birth control or procreate and starve." According to a 1952 law, Japanese physicians are permitted to perform abortions for health and economic reasons. The authorized interruption of pregnancies has had some complications such as sterility, unrelieved pelvic disorders, neuroses, and chronic invalidism. One noted gynecologist has urged physicians to take the uterine curettes out of their instrument cases and throw them away.[1]

Japan also has an active voluntary sterilization program and low-income Japanese can get instruction and contraceptives free of charge from local health officers.

INDIA LAUNCHES PROGRAM

In India, where a child is born every two seconds and the annual baby crop would fill another New York City, the government is launching a $147 million family planning program in a third five-year plan from 1961 to 1966. The program will call for surgical sterilization of volunteers, contraceptives, and nationwide publicity to make birth control popular among the poverty-stricken country's 400 million people.

In Sweden there is a national league for sex education and the last legal obstacle to birth control was removed in 1939 with the abolishing of a law against the public sale of contraceptives. The British government does not directly promote birth control, but advice on the subject is some-

times given in welfare clinics run by local authorities under the state health plan.

On the other side of birth control opinion are countries such as Italy and France. Italian law forbids promoting birth control for other than health reasons and provides for employers to pay family bonuses to their employees. France strictly forbids any form of birth control program.

In the Netherlands, the government has supported bills financially rewarding families with three or more children and the penal code forbids selling contraceptives openly. In nearby Belgium, there is no state supported birth control program, and the government provides increased benefits for larger families.

RESEARCH INCLUDES HERBAL REMEDIES

Even if all countries and religions were willing to back an all out population control program, a practical contraceptive has yet to be discovered. Many, such as the common male device and various foaming powders, pastes, and liquids, are inexpensive enough but are psychologicaly handicapped.

Much research is presently going on to develop a contraceptive pill. Some of the experimentation concerns two ancient herbal remedies, *Lithospermum ruderale* and *Pisum sativum*. *Lithospermum,* a common prairie plant, was used by the Indians of the Southwest to brew tea drunk by men and women for its temporary infertilizing effect. All investigation shows that it does seem to inhibit conception in laboratory animals, but not unless it is fed in huge quantities—and the inhibitor has yet to be isolated.

Pisum sativum, the common garden pea, has also been the subject of much investigation. Several years ago an Indian researcher heard that rats kept experimentally on a diet of peas produced no litters. After numerous experiments, he decided that the causative factor was a chemical combination called meta-xylohydroquinone. During 1953-55 he tested it clinically on more than 700 women. Conception was by no means halted, but according to his report, it was reduced by about 50 per cent.

VALUE NOT PROVEN

The use of the meta-xylohydroquinone compound is quite simple as the subject only has to take two capsules a month, one each on the 16th and 21st days of the menstrual cycle. However, no investigator other than the discoverer has established such a high degree of effectiveness in testing the compound. The Indian government has authorized a mass test program which has yet to get underway. Until some such test is made, the contraceptive value of *Pisum sativum* will remain a mystery.

Another type of contraceptive which would not be acceptable in Western society but might be used in other parts of the world, is the prevention of embryonic development. A chemical compound known as MER-25 investigated by Warren Nelson and Sheldon Segal at the Rockfeller Institute has been successful in laboratory animals and has undergone some preliminary tests in humans. Since MER-25 works only in the fallopian tube, it has to be taken before the egg reaches the uterus. So far as can be foreseen, the compound causes no change in the menstrual cycle, no interference with hormonal activities, and no physical side effects.

Much of the present day contraceptive research is taking a physiologic approach. The normal pituitary-ovarian relationship is one that can be easily disrupted. When estrogen or progesterone is administered in sufficient quantity during the menstrual cycle, the resultant inhibited pituitary gonadotropin production may prevent ovulation in that particular cycle. This well-established effect of estrogens and progesterones on pituitary secretion has led investigators to interest themselves in the clinical possibility of employing the ovarian hormones or related orally effective compounds to inhibit ovulation and thereby prevent conception.

Estrogens were first employed in isolated instances but apparently no full-scale study of the adequacy of estrogens for this purpose was made, possibly because of concern over growth-producing effects on genital tissue.[2]

PROGESTERONE TESTED

When the new progesterone compounds became available they were very early put to use to determine their effectiveness as anti-ovulation agents. The first to employ these compounds as conception-control agents in a large-scale study were Gregory Pincus, Worcester Foundation for Experimental Biology, Shrewsbury, Massachusetts, and John Rock, professor emeritus of gynecology at Harvard, and their associates at the Family Planning center in Puerto Rico.

Following his earlier work, which demonstrated that progesterone inhibits ovulation in the rabbit and mating in the rat, Pincus reported that oral administration of 300 mg. per day of progesterone from the 5th to the 25th day of the menstrual cycle caused a significant suppression of the usual signs of ovulation in women, namely, the characteristic rise of basal temperature, the typical appearance of secretory endometrium, and the "ovulation" flush of vaginal cornification.[3] He

concluded that progesterone taken by mouth during the follicular phase of the cycle tends to suppress ovulation in the human female. An undesirable effect of progesterone was the occurrence of "escape-bleeding" which he observed in approximately 18 per cent of the cycles.

Among other compounds studied, 17a-ethinyl-19-nortestosterone (compound I), and 17a-ethinylestraeneolone (compound II) proved to be effective inhibitors of ovulation in the rabbit and antifertility agents in the female rat. These effects were temporary and disappeared when administration was discontinued.

COMPOUNDS PROVE EFFECTIVE

The Pincus-Rock investigations suggested that compounds I and II may be given daily by mouth in a dose of 10 to 20 mg from the 5th to the 25th day of the menstrual cycle. The tests show that such treatment does not interfere with the normal length of the cycle, and after therapy has been discontinued, normal menstruation is resumed. Judging from presently available results, there is no interference with subsequent fertility.

In a test of six men, Pincus found that administration of small amounts of compounds I and II caused suppression of spermatogenesis, loss of libido, and comparative impotence. When medication was discontinued, these effects slowly disappeared.

In four field trials involving 830 women in Puerto Rico and Haiti, the compounds proved almost 100 per cent effective. About 55 per cent of the women reported a gain in weight, but 20 per cent reported a loss. About a fifth reported a decline in libido, about the same an increase. Around 39 per cent felt an improvement in their general health as against 10 per cent who felt worse.

In 1956, the clinical staff of the Los Angeles Planned Parenthood Center embarked on a study of the new progesterone compounds as contraceptive agents.[2] According to Edward T. Tyler and Henry J. Olson the most effective of these proved to be norethindrone (19-nor-17-alpha-ethinyl testosterone) and norethynodrel (17-ethinyl estraenolone), both of which proved effective when taken orally, and 17-alpha-hydroxy-progesterone caproate (17-AHPC), which is given by intramuscular injection.

In a group of 715 patients who were given the medicaments orally for the purpose of controlling conception, 474 (66 per cent) discontinued its use. Two hundred forty-one (34 per cent) remained actively on therapy. There were 3,082 patient-months of use of the preparations (excluding months when any other conception control technique was also used) during which 22 pregnancies occurred, a pregnancy rate of 8.6 per cent.

Among the 474 patients who discontinued the medication, 177 (37 per cent) did so because of various side-effects. The most common were gastrointestinal symptoms and bleeding disturbances.

Although a contraceptive that is inexpensive, easily used, and 100 per cent effective, has yet to be perfected, the investigators are getting closer every day. While nations legislate birth control. in and out of the realm of legality, and religious leaders denounce or support the principles of population control, the real fight is going on in the laboratory. For in the first place, birth control is a medical problem. ★★★

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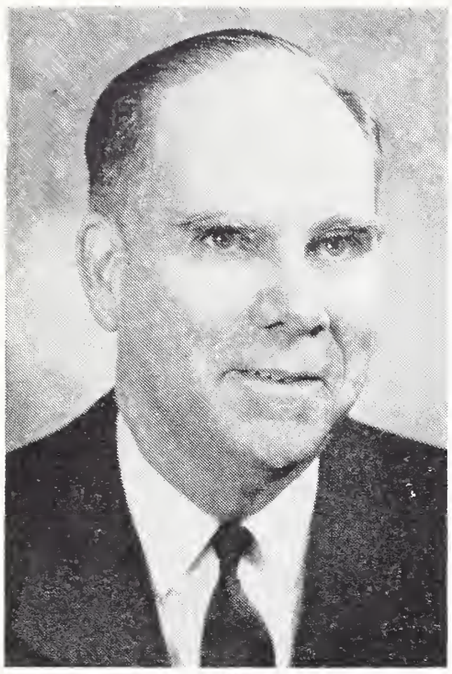
HEALTH INSURANCE FOR THE AGED

According to the Health Insurance Association of America, 60 per cent of all senior citizens who need and want voluntary health insurance will enjoy this protection by the end of the current year. Further, this percentage will increase until three-quarters are covered in 1965, and 90 per cent by 1970. These programs under voluntary prepayment and private companies will be tailored to individual needs. Conversely, the Forand bill offers only federal medicine, production line style, which is extravagant and ineffective.



The President Speaking

STANLEY A. HILL, M.D.
Corinth, Mississippi

A New History

AFTER THE SECOND EDITION of the *History of the Mississippi State Medical Association* came out in 1949, a revision at intervals of five years was recommended. Eleven years later there has neither been a supplement nor a revision. When this writer was made President-elect, the history revision project was explored. The Council on Budget and Finance considered the move rather thoroughly. As a guide to a loose and perhaps low estimate of the expense involved, the overall features of a desirable history were studied.

Traditionally, war has provided intriguing material to be recorded. Therefore, it was thought that special research should be devoted not only to the period of the War Between the States but to subsequent wars. This obviously would require a sizeable fund. Since the budget did not contain this money, the Council recommended that $1,500 be set aside annually for history writing. The 1959 House of Delegates voted this down. In the next breath, a committee to study history writing was created. The endeavor of this committee has included procuring biographies of prominent late members and consultation with a professional historian.

An officer of one of our larger component societies is preparing a history of that unit. It would be most laudable if the other fifteen would write the record of their groups. This would materially enhance the history files and would be a good start toward the revision. Biographies of prominent members are desirable. The interrelationship of medical activities with the general history of Mississippi is recommended by historians. The next revision will, no doubt, include some advances that originated here. Medical education itself will provide material for a chapter. The growing numbers of Mississippi medical writers is stimulating. Related specialties such as dentistry could provide interest absorbing material. All in all if dug up the several parts of a good history must be available. The challenge to develop it is strong. Let us accept it and produce a work of which each member will be proud.

The story of the Mississippi State Medical Association is so firmly intertwined with the development, progress, and future of the Commonwealth of Mississippi as to make them inseparable. In order that desirable data not be lost, it should be recorded. In contrast to lackadaisical members, there are many who want a quality third edition. Financing is not an insurmountable obstacle. The Council's plan of installment banking should be resumed and continued until a quality production would be realized. ★★★

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EDITORIALS

Importance of Medical Research In the South and in Mississippi

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BEFORE WORLD WAR II, medical research was almost unknown in the South except in a few isolated institutions, but during the past 15 years almost every southern medical school, as well as many individual hospitals, has developed outstanding research programs. In Mississippi, for instance, the amount of money spent on medical research in 1940 was only a few thousand dollars and in 1954, the amount was still less than $50,000 per year. Today, only six years later, the expenditure for medical research and associated research teaching programs in the state amounts to approximately $800,000 per year. It can well be predicted that within another year this amount will be above $1,000,000 annually.

In effect, the coming of extensive medical research programs into our medical centers represents a completely new industry for the South. Almost every cent of the money put into these programs comes from outside sources, which means an actual capital inflow into the South.

From the Department of Physiology and Biophysics, University of Mississippi School of Medicine.

But the importance of medical research in a medical center is much more than its financial aspects. We can simply go back into history and record the fact that world renowned doctors of medicine have almost all come from medical centers exercising leadership in the world of medical research.

PROFS LOST IN RESEARCH?

Yet, strangely enough, it is difficult to say why schools with outstanding research programs train outstanding doctors. In fact, we hear more often the statement that research professors are so much interested in their research that they fail to give adequate time to their students. The writer has tried to ascertain the truth in this statement, and here are some of the facts found:

True enough, many research professors are lost in their research and are subject to criticism for their teaching methods. But, equally as many non-research professors are just as much lost and have no just cause; they deserve equally as much criticism.

On the other hand, among both research and non-research professors are found excellent teachers; yet, which is better for a school, an excellent

teacher who is a researcher or one who is not? In answering this question, we come back once again to the world-known fact that medical schools devoted to research have produced the medical leaders. There is a real reason for this that is neither esoteric nor fictitious but is nevertheless difficult to explain. Let us call it simply "atmosphere."

MORE RESEARCH, BETTER STUDENTS

A medical school devoted to research is composed of teachers who are deeply interested in their work, and this state of interest pervades the entire atmosphere of the institution, creating interest among the students for their studies as well. A research professor often is so deeply entranced in one particular field of endeavor that he forgets that other fields might exist, and medical students sometimes emulate these professors. But this is not bad, for it causes the medical student to become aware early in his career of his particular interests, and from there on he becomes a devoted student.

Therefore, between atmosphere and devotion, one can hardly fail to train truly outstanding doctors, some of them devoted to the entire field of medicine and others to one particular specialty.

IMPORTANCE IN SOUTH

Now, we come back to the importance of medical research in the South. Each day we see more and more devotion among our students for deep study into medical problems, a type of study required for the research mind, and, at the same time, we see increased depth in the student's understanding of the finer aspects of bodily function as well as the intricacies of diagnosis and therapy. Also, we see each day more devotion by the student to continued reading in those phases of medicine in his field of interest. This is a habit that will last long beyond medical school, a habit that determines as much as anything else a doctor's continued worth to the medical community. Much if not most of this habit is engendered by the atmosphere that surrounds a research institution, for a continued interest in the frontiers of medicine by the professors cannot help but rub off on the students.

It is a matter of common knowledge that a medical school's reputation is based almost entirely on its research productivity, though we might question whether or not this is a legitimate criterion for establishing a reputation. Yet, most medical school teachers will attest to the fact that the quality of the doctor finally produced is determined about 75 per cent by the quality of the student admitted into the first year class and that the quality of the student is determined by the school's reputation. For this reason, one of the most important aspects of research in our medical schools is to draw better students so that in turn we can train better doctors.

If medical research means so much to a medical school, then it is to the advantage of all of us—to those of us in the medical schools, to the doctors in practice, to the students, and to the public—to support research in our medical institutions as fully as possible. Particularly must research be given its due recognition both in medical and lay circles, and as much aid as possible is needed to attain the proper support for research activities, especially from our legislature. In turn, it is equally as important that those in the field of medical research not use this as an advertising medium but use it as a means for true service.

★★★

2500 North State Street

How Many Serpents?

I

It had to happen sooner or later, meaning, of course, this business of the caduceus versus the Aesculapian staff as a symbol of medicine and the use of the former in the emblem of the Mississippi State Medical Association. Two of the association's more erudite friends, Dr. Harry L. Arnold, editor of the *Hawaii Medical Journal,* and Dr. C. Grenes Cole, general manager of the *Journal of the Louisiana State Medical Society,* invited attention to this inconsistency when sending congratulations on the new JOURNAL. In pointing out that the staff of Aesculapius is the official symbol of the medical profession as well as medical organization, these gentlemen demonstrate not only that they're sharp but correct as well.

In adopting the caduceus as a part of its emblem, M.S.M.A. has lots of company, especially among doctors of medicine, their professional societies, and medical schools. Even the American Medical Association didn't settle the controversy until its House of Delegates gave the matter learned consideration at the 1910 annual session. The literature is replete with scholarly essays on the symbols, their meanings, and histories of their respective usage. But who's right or wrong is mostly academic because familiarity and usage are

sometimes stronger arguments than scholarly documentations.

II

M.S.M.A.'s emblem is of fairly recent vintage, having been designed in 1950 by a Mississippi artist, Vernon Asprooth. It is simple and totally devoid of deep symbolic meaning. There is the familiar geographical shape of the state of Mississippi in silhouette over which is fixed the classic

How many serpents? It depends on whether it is the staff of Aesculapius, left, used in the A.M.A. emblem, or the caduceus, right, in M.S.M.A.'s crest.

caduceus, inclined to the left at an angle of about 25 degrees. Floating midway horizontally over the entire device is a heraldic scroll bearing the letters M.S.M.A. It is generally called the crest or emblem and it was officially adopted as such by the Board of Trustees (then known as the Council) in 1951 under the broad authorities contained in Article XI of the constitution. At that time, the association was aware of the caduceus-staff difference and the official action was apparently nothing more than exercise of preferential choice.

During the past decade, the little emblem has been reproduced millions of times on letterheads, publications, membership cards, and even in bronze and stone on the association's headquarters building. As far as official records are concerned, nobody has ever raised a question about the caduceus.

III

The legends of Greek and Roman mythology concerned with the two devices and the gods with whom they are identified are interesting and amusing, Everybody knows that the Greek deity Hermes, called Mercury by the Romans, was never without his caduceus. On the other hand, the Greek physician-god, Asklepios, better known by his Roman name of Aesculapius, was well along in his professional career before he acquired the staff-and-single-serpent device. And, parenthetically, there have probably never been two creatures with wider personality differences than Hermes and Aesculapius.

Fister and Hendricks describe Hermes as ". . . a messenger, a herald of assemblies, the patron of commerce and peace, god of the rogues, and (an) undoubetdly clever thief (who) could roll a wicked game of dice."[1] Since no self-respecting herald could function properly without a wand, Hermes got himself a straight piece of olive branch called a *kerykeion* which, by Latin derivation from classic Greek, became caduceus.

Just how the serpents and wings were added isn't precisely recorded but one legend has it that Hermes found two snakes fighting one day and separated them with his olive branch. To reward his kindness after the slithery belligerents saw the errors of their ways, they entwined themselves about his *kerykeion*. Supposedly, the wings came next, because Hermes found it necessary to get around with considerable speed.

In another essay, Arnold states that ". . . all the meanings that we might attach to the caduceus can be summed up into one, viz., that it symbolizes the peaceful condition of business—the mercantile world as opposed to the military."[2] Perhaps, some authors suggest, this is the reason for the U. S. Army Medical Corps and the U. S. Public Health Service continuing to use the caduceus as official emblems, the intent being to declare the humane, noncombatant purposes of the two services.

IV

In contrast with the prankish Hermes, Aesculapius, son of Apollo and the nymph, Coronis, was never portrayed in mythology as other than an upright, dedicated man. Legend has it that he ". . . studied the healing art and soon surpassed his teacher, Chiron, for his patients never died and he even succeeded in recalling the dead." His celebrated staff of knotty pine, selected in all probability for general utilitarian purposes, acquired its single serpent during a professional visit.

It seems that Aesculapius was called to attend Glaucus when the latter was struck dead by a thunderbolt. A serpent entered the chamber where the dead man lay and Aesculapius killed it with his staff. A second serpent entered and placed herbs in the mouth of the first, restoring it to life. Using the same herb, Aesculapius brought Glaucus back to life as the heroic, herb-bearing serpent entwined itself about the knotty pine staff. Subsequently, the snakes were made sacred and

symbolic with the art of healing. Although apparently unrelated, it is interesting to observe that the caduceus and Aesculapian staff are associated with two serpents each.

In mythology and superstition, serpents have been regarded as representing wisdom. Because they slough their skins periodically, they renew life symbolically if not actually. The speed and grace with which a snake pursues and attacks its prey gradually led to sacred fascination and worship. Stenn is quoted as stating that ". . . . to the snake was attributed rejuvenation, convalescence, wisdom, and long life. The serpents soon participated in certain rituals that were a definite part of the healing and curative procedures in the Asklepian temples."

V

The American Medical Association literally killed two snakes with one stone by settling the argument of caduceus-or-staff and adopting its present official emblem at the 1910 annual session. The reference committee stated that ". . . the true ancestral symbol of the healing art is the knotty pine and the serpent of Asklepios . . ." and recommended that ". . . the color of the new emblem should be scarlet and gold and the new emblem should be the knotty rod entwined with the serpent."[3]

Smith says that the scarlet and gold were chosen because ". . . in the days of alchemy, the elixir of life was a red tincture and the key to wisdom, a red powder. The gold represents the sun, long regarded as a healing influence."[4]

VI

There's a melodramatic ending to Aesculapius' career, because he was a victim of jealousy. Pluto, god of the underworld, became alarmed that Hades was being depopulated, largely through Aesculapius' success at saving and restoring life. By conniving with Jupiter, god of the heavens, Pluto had Aesculapius killed with a thunderbolt, a noisy method of assassination often used by these ancients to remove competition. But Apollo, Aesculapius' father, arranged to have the good physician made immortal and placed among the stars in the southern heavens as Ophiuchus, the snake bearer.

So, how many serpents should there be? Officially, only one but by worldwide usage, often there are two. And anyway, if there were only one symbol, what would be done with all this scholarly research?—R. B. K.

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'Thanks a Million, Dick!'

The American medical profession has many effective, knowledgeable allies in its struggle against those forces which would impair if not destroy our traditional pattern of quality medical care. It's entirely in order to recognize these allies publicly and express appreciation for their service in this worthy activity.

Mississippi's Blue Cross-Blue Shield plan has been such an effective ally in opposing the Forand bill. To begin, the plan was one of the first in the nation with a prepayment contract for senior citizens. It is a meaningful, realistic contribution to extension of this necessary and desirable service. Now this contract is being improved with additional health coverages while it continues to follow the traditional pattern of indemnity payment.

Mississippi has announced another first in prepayment health coverage for those over age 65. Blue Cross-Blue Shield is offering a catastrophic cancer care endorsement for existing contracts—up to $2,500 in hospital, surgical, and medical care for $1.50 more per month for single subscribers and $3 more for those with sponsored dependents. This is going to be a meaningful gain in effective voluntary coverage, making just about everyone except Mr. Aime J. Forand happy.

But a significant contribution by Blue Cross-Blue Shield has been a project initiated by the executive director, Richard C. Williams. During recent weeks, he and his associates have written letters to each of their 330,000 plus member-subscribers, explaining the adverse impact which the Forand bill, if passed, would exert on private medical care and free choice voluntary health coverage.

In the spirit of fraternity and mutuality for this M.S.M.A. says, "Thank a million, Dick!"

Narcotic Don'ts

Organized activity in illicit narcotics traffic by unscrupulous individuals is often aimed at physicians because they represent an immediate supply source. An overwhelming majority of doctors are familiar with the tricks of this despicable trade and are seldom if ever taken in by the addict's or peddler's ruse. But even wary, careful physicians sometimes become unwitting victims and those who relax their guard for a moment literally invite trouble.

Recently, there was a rash of burglaries of physicians' offices in the southern portion of the state. Scarcely a month goes by that professional bags left in automobiles aren't rifled. Any practitioner can expect visits from strangers who will use every trick in the book from phony symptoms to clinical blackmail in their efforts to obtain narcotics.

Mr. Ernest M. Gentry, Dallas, District Supervisor, U. S. Bureau of Narcotics, offers a useful checklist of narcotic don't's for the practicing physician in which M.S.M.A.'s Board of Trustees concurs, good review information even for the sophisticated practitioner.

Don't, says Mr. Gentry, leave prescription pads lying about the office, especially in treatment rooms where the patient may be left alone. The same admonition goes for narcotic supplies used in office and home call practice. Recently, there were two cases of attempted fraudulent procurement of Demerol through forged prescriptions in a major Mississippi city. Prescription pads are the addict's blank checks.

Don't be careless in writing prescriptions or in specifying quantities of the narcotic prescribed. For example, writing the Rx in pencil for *any* medicinal is asking for it: "Miltown" could be altered to read "Morphine." Mr. Gentry warns against such prescription writing practices as "Morphine HT ¼ #10" because a zero might be added. Rather, he says, use brackets around figures or, better yet, spell out quantities. It goes without saying that minimum amounts of narcotics consistent with the treatment situation should be prescribed. Leaving signed Rx blanks with an aide is obviously bad.

Don't fall for the slick stories of addicts and peddlers who pose as patients. Some are experts at producing bloody sputum, simulating deep coughs, or coming up with convincing but phony symptoms. You're the doctor, says Mr. Gentry, so make your own diagnosis before prescribing. Most physicians need no reminding about the danger in prescribing a narcotic on the patient's say-so that another physician has been giving it; check with the physician if diagnosis warrants. Likewise, it's poor practice to prescribe narcotics without actually having seen the patient at the time of writing the Rx unless care has been continuous and diagnosis, well established.

Don't carry more than minimum emergency supplies of narcotics in professional bags and see that these are safeguarded when left in automobiles. Although bedside and office administration are permitted without formal Rx or similar record, it's good practice to keep records of all narcotic dispensing. Since federal law requires a physician purchasing narcotic supplies to use an official form, don't buy office stocks on an Rx blank.

And two final don't's, both pertinent: Don't resent the pharmacist's calling for verification or further information about a narcotic Rx. Most druggists are conscientious professional people who are dedicated to fulfilling their roles as members of the health team. Last, don't hesitate to call your District Supervisor of the U. S. Narcotics Bureau to get or give information. Mr. Gentry wants physicians to communicate with him when he can render service. His address at Dallas is 1114 Commerce Street and his telephone number

"I went to sleep under the . . . No, thanks, I'll stand . . . sun lamp."

is RIverside 8-5611. The same goes for your state medical association.

Only the scientifically trained practitioner can put a narcotic drug to proper use; in the hands of paramedical personnel, these drugs may be dangerous. In the hands of the unscrupulous, they can be murder.—R. B. K.

Thanks, But No Thanks!

The editor's mailbag contains strange contents on occasion, pretty well proving the old saw that some people will say almost anything. The same goes for views on governmental philosophy.

Comes now the National Education Association with its most recent booklet, "Will Your Child Get a Quality Education?" Sounds worthwhile, doesn't it? What parents would wish his child to have other than the best possible education with which to meet this complex and competitive world? So, for sixteen pages, NEA dotes on quality teachers (we're for them), quality curricula (we want the best), quality buildings (look to Mississippi for leadership in its imaginative school construction program), and ". . . adequate financial support." Whereupon, we come to an abrupt parting of the ways.

After thirteen pages of pious platitudes with which almost nobody disagrees, NEA gives the reader the business. The clincher is a pitch for the Murray-Metcalf bill, federal aid to education, and a strong plea for federal funds "to help locally." Just where in the world, if we may ask, do federal funds come from in the first place? Obviously not from NEA's swank Washington headquarters. Obviously not from the gentlemen sponsoring the bill because this is only a part of their interest in the application of federal funds. Each, as a parenthetical aside, favors enactment of the Forand bill.

And why should physicians be concerned over this silky pitch for federal aid to education? In the first place, doctors are citizens and as such, they are interested in their communities and social institutions. Secondly, there's the matter of federal funds for medical education. On this issue, there are varying views.

The American Medical Association says that "one-time, no-strings, bricks-and-mortar" federal funds for medical schools are acceptable. Congressman John Bell Williams points out wisely that there are no such things as federal funds without strings and M.S.M.A.'s House of Delegates has concurred in the congressman's observation. At the 91st Annual Session, the delegates stated that they oppose all such federal financing for medical education.

The pig in this poke is a vicious animal with big teeth, so to the National Education Association as regards their sending this mailing to M.S.M.A., the firm answer is, "Thanks, but no thanks."—R. B. K.

The French Had A Word for It

The French have made substantial contributions to surgery and at one time, many thought of Paris as the surgical capital of the world. Few think of France as a major source of medical philosophy or writings in ethics, these being mostly the Middle East as regards the pre-Christian era and more recently, Great Britain and the United States. The American College of Surgeons has published a short monograph attributed to Guy de Chauliac, a French physician who lived in the 14th century. His "What the Surgeon Ought to Be" is worthwhile contemplating.

"The conditions necessary for the Surgeon are four," de Chauliac said; "first, he should be learned; second, he should be expert; third, he must be ingenious; and fourth, he should be able to adapt himself."

"It is required for the first that the Surgeon should know not only the principles of surgery but also those of medicine in theory and practice; for the second, that he should have seen others operate; for the third, that he should be ingenious, of good judgment and memory to recognize conditions; and for the fourth, that he be adaptable and able to accommodate himself to circumstances.

"Let the Surgeon be bold in all sure things and fearful in dangerous things; let him avoid all faulty treatments and practices. He ought to be gracious to the sick, considerate to his associates, cautious in his prognostications. Let him be modest, dignified, gentle, pitiful, and merciful; not covetous nor an extortionist of money, but rather let his reward be according to his work, to the means of the patient, to the quality of the issue, and to his own dignity."

Foreign Journals

Lung Cancer Among White South Africans. Geoffrey Dean: British Med. J. 2:852-857 (October) 1959.

There have been some interesting facts noted about cancer of the lung, especially its increase as a cause of death in the general population. Those who do not smoke cigarettes are most certain in the information they present that smoking is the primary cause in the production of carcinoma of the lung. Those who do smoke cigarettes offer much information that the hydrocarbons of auto exhaust, manufacturing plants, steel mills, and other such establishments, as well as smog, are the real culprits. Certainly there is enough interest being generated to cause many research agencies to be at work to determine the cause of this increase in cancer of the lung.

The recent article by Dean reports his analysis of deaths from lung cancer among male residents of South Africa in the period from 1947 to 1956. The Caucasoid South African men have long been numbered among the world's heaviest smokers, possibly because South African cigarettes cost only 85 cents per hundred, and yet they have a relatively low lung cancer death rate.

Dean classified the lung cancer victims according to age, country of birth, and place of residence. He found that in the age group 45 to 65, British immigrants had a higher death rate from lung cancer than men born in the Union of South Africa, but after 65 there was no significant difference in the lung cancer rates. In general, Dean's study showed that the immigrants from the industrial cities of Great Britain had a much higher rate of lung cancer than the native South Africans, although the South Africans smoked more.

Since a large majority of British immigrants came to South Africa before reaching middle age and in general, had smoked more South African than British cigarettes, the author felt it was unlikely that the type of cigarette played a great part in the lung cancer incidence. It appeared that the etiological factor was exposure to something in Europe: most probably the atmospheric pollution caused by urbanization and industrialization. This theory was born out by the discovery of a higher lung cancer rate among residents of South African towns, Durban particularly.

Dean does not state whether or not he smokes, but his arguments line him up on the side of the smokers. At any rate, it must be recognized that irritants to the bronchial tree can and should be recognized as a factor in lung cancer whether they are smoke, smog, or hydrocarbon exhausts. Studies to date indicate that the factor which may increase cancer of the lung incidence is more concentrated in urban than rural areas.

Since depopulation of the cities is hardly feasible, "you can't get them back on the farm, after they have seen Paree," action should be directed toward prevention of air pollution by these known irritants.

Domestic Journals

The Treatment of Dermatomycosis With Orally Administered Griseofulvin. Harvey Blank and Frank Roth: A.M.A. Arch. Dermatology 79:259-266 (March) 1959.

Since the presentations by Blank and Roth before the American Academy of Dermatology in December 1958, on the use of griseofulvin, many articles concerning almost every phase of the new drug have been written. One entire symposium of 36 well written papers was held in Miami in October 1959.

Dr. J. C. Gentles, who reported the use of orally administered griseofulvin in the treatment of guinea pigs experimentally infected with Trichophyton and Microsporum fungi in August 1958 (Nature, London 182:476 (August) 1958) participated in the symposium.

Newspapers and popular magazines have published many articles concerning the new drug. Some of the articles have been overly dramatized and perhaps slanted to some extent. Griseofulvin is colorless, neutral, thermostable antibiotic isolated from *penicillium griseofulvin* by Oxford, Rainstrick, and Simonet in 1939. The drug remains under study by many capable clinical and experimental investigators.

At present, it appears that griseofulvin is of low toxicity and can be employed successfully by oral administration in the treatment of recent or long standing superficial fungus infections of the skin and its appendages. It is of no value when applied topically, and it is not efficacious in the treatment of yeast or yeast-like organisms such

as *candida albicans* (monilia), *mallassezia furfur* (tinea versicolor), or *blastomucosis dermatididis* (American blastomycosis).

Although the drug is of low toxicity, it is a new antibiotic and this should be kept in mind because it may possess properties of which we are not yet aware. It should be given with the patient under observation. A definite and accurate diagnosis should be made with identification of the causative fungus before the treatment is begun if disappointment of results and wasted expenditure of the patient's funds are to be avoided.

How Adolescents Differ From Younger and Older People. J. R. Gallagher: Connecticut Med. 22:649 (August) 1958.

Effective medical care of adolescents is "dependent upon a knowledge of the ways in which they and their ailments differ from children and adults and their disorders," emphasizes Gallagher. He notes that "one of the outstanding personality traits of adolescents is their unyielding overconcern with themselves." They are intent on developing their own personalities, resistant to efforts to force them into a mold, and disinterested in any adult who is not interested in them. The physician can deal with them effectively only if he recognizes their individual personality traits and pays just as much attention to them as to physical symptoms.

The physicians can utilize to advantage his patient's preoccupation with himself. He must be more willing to listen than to advise; he must show respect for his patient as a young person trying to become adult. Real or imagined body defects or deficiencies "are charged with emotion for the adolescent; the same defects usually are of little concern either to the child or to the adult." Therefore, the doctor's examination should be thorough, private, and attentive to what may seem minor. The young person is often unduly concerned with rate and extent of sexual maturation. The girl who is taller or flatter-chested than her friend or the boy who is underdeveloped or beardless will be worried. They need constant reassurance and continued interest. To allay their fears, they need to learn that not being average does not necessarily mean being abnormal.

Many adolescent anxieties and symptoms result from their conflicts about sex. "They need, and will benefit from, opportunities to talk about these worries to an understanding adult who will take them seriously and who will not be quick to criticize or to advise," it is stated.

The adolescent's constant search for prestige and recognition from his contemporaries may require strenuous athletic activities. This may conflict with the doctor's prescription of rest, particularly where the patient presents cardiovascular problems, fatigue, or back pain. Unnecessary restriction should be avoided and replacement activity should be encouraged.

School is another source of anxiety and will frequently cause them pain or headaches. Therefore, their school performance is an important part of their medical history.

The changing relationships between the adolescent and his parents, who may be possessive or fearful when the child seeks independence, are another cause of conflict. An upset home, questions about religion, death, and misbehavior of a hero also confuse and disturb them. "To foster independence, to help build confidence, to interpret the reasons for the parent's anxiety to these young people, and to persuade parents that their function is to produce an adult, not just a child, are important parts of the doctor's job," Gallagher adds. Adolescents, in trying to become independent, need acceptance and to be able to "turn to strong, stable, warm adults for whom they have respect and in whom they have confidence, and upon whom they can rely, but who will not dominate them."

In conclusion, Gallagher notes that adolescents have a great capacity with their one constant characteristic "their unpredictability."

"The doctor and I are somewhat acquainted. . . . We met quite by accident."

Barnett Pledges Support To Mississippi Medicine

Gov. Ross R. Barnett pledged his support in the fight against federal health care programs to 72 representatives of Mississippi medicine at a February 4 meeting in Jackson.

Barnett . . . pledges cooperation.

"As long as I'm governor of Mississippi, I'll cooperate with you in every way to prevent socialized medicine," the Governor said.

Barnett spoke to the first conference of component society leaders of the Mississippi State Medical Association which was held in the Victory Foyer of the Hotel Heidelberg. The conference was called, according to M.S.M.A. President Stanley A. Hill, to consider means of improving medical organization and furthering medicine's goals in Mississippi.

Barnett's talk was the climax of the meeting. The Governor spoke primarily on the problem of the aging which he termed "the greatest issue of our time."

"The problem of aging is a vehicle for those whose objective is socialization of all goods and services. They really care little for the aging or any other segment of the population," he said. Barnett said the chief proponents of socialized medicine were mainly the same elements advocating "vicious, destructive legislation" under the banner of "so-called civil rights."

Speaking of the Forand bill and similar proposals to furnish federally controlled surgical and hospital care for those over age 65 under the Social Security program, the Governor said, "The taxpayers would soon realize that this is no free program." He pointed out that the proposals now before Congress would raise Social Security taxes on everyone to about 10 per cent of wages.

Most persons over age 65 in Mississippi and the nation are not under Social Security and would receive no benefit from this huge and unnecessary federal expenditure, Barnett said.

BACKS STATE PLANNING

As the best means of furnishing health care for the aged, Barnett backed state and local planning. Throughout our state, he said, there is an excellent distribution of physicians and hospitals. Physicians, hospitals, and agencies of state government have joined hands to extend and improve health care of the aging, he pointed out. "With their help, we shall care for our own," Barnett said.

"It will be the purpose of this administration to offer both leadership and the climate of confidence where the full potential of our own professional and service resources can do the job," the Governor pledged.

Turning from medical issues, Barnett spoke briefly on his economic development program. He said that the present proposal to reduce the state income tax by one-half of one per cent, if passed, would put the Mississippi tax structure on a competitive basis with other Southern states in attracting industry.

Barnett said his proposed economic program, "will put the state on the map from an economic standpoint."

Prior to the governor's address, a number of speakers and panels discussed various aspects of the state medical organization.

In opening the program, Dr. Stanley A. Hill, Corinth, M.S.M.A. president, said, "We are here to study local problems, membership procedures and goals, programs, the duties of officers, coordination of affiliated units, pertinent legislation, and visitation."

Hill said there were societies that did not know a given county belonged to them, that had not heard a scientific paper in five years, that recognized a doctor as a member but did not require him to pay state dues, and an entire county whose members had never attended a society meeting. "These situations must be corrected," he said.

PANEL STUDIES MEMBERSHIP

The first panel of the afternoon discussed "Membership—How, Why, and Who." Dr. Joseph B. Rogers, Oxford, panel moderator, reported that 229 of the 1,561 Mississippi physicians eligible for membership in state and county medical organization are not members.

Panel member Dr. A. V. Beacham, Magnolia, spoke on the reasons doctors should belong to the local medical society and the relationship of the local group to the state and national organizations. Dr. C. D. Taylor, Jr., Pass Christian, discussed using social and entertainment aspects to attract members, and the role of the society secretary. Dr. Jim C. Barnett, Brookhaven, talked on the adjustment of the society program to modern times. Mrs. Jo Ingram, M.S.M.A. Comptroller, Jackson, served as consultant for the panel.

Following the panel, a problem clinic was conducted on specific problems of local medical organization. Participants were Dr. Robert R. McGee, Clarksdale, who discussed "Local Programs"; Dr. James Grant Thompson, Jackson, "Meeting Attendance"; Dr. Thomas W. Wesson, Tupelo, "Motivating the Membership"; and Dr. Howard A. Nelson, Greenwood, "Professional Liability Insurance."

CROWSON, RAMSAY: 'DISCUSSORS'

Dr. William N. Crowson, Clarksdale, and Dr. Frank L. Ramsay, Laurel, served as discussors for the problem clinic.

Dr. James T. Thompson, Moss Point, acted as moderator for the last section which was entitled "Working Together for Our M.S.M.A. and Our A.M.A." Rowland B. Kennedy, Jackson, executive secretary of M.S.M.A., told the doctors, "The Mississippi State Medical Association is probably one of the better such bodies in the entire structure of the American Medical Association among all 54 constituents. However we have a need for more effective communication among our members and for a greater understanding and appreciation of what we are doing."

Dr. G. Swink Hicks, Natchez, president-elect, presented a three point program for improvement of M.S.M.A. Hicks called for reappraisal of the organization, a look into how it was "keeping medicine's house in order," and a renewed dedication to the tasks ahead of Mississippi medicine.

Closing this section, Joe D. Miller, Chicago, A.M.A. Division of Field Service, outlined what the 175,771 members of A.M.A. get for their $25 annual dues. Miller said out of the $25, $14.50 goes for subscriptions to A.M.A. publications—$7.50 for *J.A.M.A.*, $4.00 for a specialty journal, $1.50 for the *A.M.A. News,* and $1.50 for *Today's Health.* The other $10.50, according to Miller, helps finance the professional and public services provided by A.M.A.

Dr. William E. Lotterhos, Jackson, chairman of the Council on Legislation, and Dr. Lawrence W. Long, Jackson, chairman of the Council on Medical Service, discussed pertinent legislation. Lotterhos said that an autopsy law, which is substantially the same as passed by the last session of the legislature and vetoed by Gov. Coleman for legal reasons, is expected to be presented to the present session. Lotterhos said the bill has been revised and is expected to pass.

Lotterhos also reported that the Forand bill or a substitute has a good chance of being reported out of the House Ways and Means Committee and being passed by the present session of Congress. He urged the doctors to contact their congressmen on this issue.

Dr. Long reported that the Board of Trustees voted to endorse bills banning fireworks in the

Hill . . . asks improvement.

state and the proposal of the Council on Medical Service to present a program for medical care for the indigent. The proposed medical care program includes an appropriation of $2,500,000 for the 1960-62 biennium, reimbursement to hospitals for eligible patients of $10 per diem with major surgery operating room fees at $20 and those for minor surgery, $10, and reimbursement authority for hospitals located in Adams, Hinds, Jones, Lauderdale, and Warren counties when superintendents of state institutions in those localities certified that care was not available by reason of facilities or equipment.

The Board, said Dr. Long, also voted to sponsor presentation of a "Good Samaritan" law similar to that recently enacted in California. Under this law, any person who, in good faith, renders emergency care shall not be liable for any civil action as the result of any acts of omissions at the scene of the care.

Long reported that the Board further agreed that a bill to reduce the statute of limitations from six to three years in the case of professional liability actions should be introduced as previously mandated by the House of Delegates.

New Medicare Contract Restores Most Service

Mississippi's new Medicare contract for 1960-61 will contain care authorizations much like the original program, according to members of the negotiating team just back from conferences with the Department of Defense in Washington. Further, they state, the simplified program will be described in a new, concise manual which will carry no fee schedule.

M.S.M.A.'s State Medicare Review Board, consisting of Drs. George E. Twente, chairman, Walter H. Simmons, and William E. Lotterhos, Jackson; Dr. H. H. McClanahan, Jr., Columbus, chairman of the Board of Trustees; and Rowland B. Kennedy, Executive Secretary, made up the five-member negotiating team. Conferences were conducted at the Office for Dependents Medical Care.

The contract was reviewed and renegotiated as relates to fees for some surgical procedures and related anesthesia. These included the cardiovascular, digestive, endocrine, female genital and reproductive, hemic and lymphatic, integumentary, musculoskeletal, nervous, and respiratory systems. No revisions were proposed with respect to medical (non-surgical) service or for surgical procedures involving the ear, eye, male genital system, mediastinum, or urinary system. Similarly, no changes were sought in the areas of pathology or radiology.

Administratively, the contract was renegotiated substantially as it presently exists except for inclusion of a new and more advantageous method of computing "package" fees such as are encountered in obstetrical and certain non-surgical services. Closer controls on identification of patients will be enforced, the team reported.

CHARGE USUAL FEES

In submitting claims for professional services, physicians are urged to charge usual, prevailing fees for care rendered. As with any pre- or postpayment plan, fee maximums exist but effort will be made to pay just, reasonable charges submitted. Each charge should be itemized on the Medicare claim form as in the past, especially when diagnostic procedures are involved.

Where extra service compensation is claimed, attending physicians should submit a separate statement in brief narrative form giving information on diagnosis, clinical findings, and extent of extra services rendered. All over-maximum claims will be reviewed to assist in securing additional charges for physicians where justification is established.

PERMIT SYSTEM CONTINUED

The present Medicare permit system will be continued under which those dependents residing with their service sponsors must first seek care in a military medical facility. Where such care is not available, the commanding officer of the service person may issue a permit. This in itself neither guarantees care authority nor payment but simply places the dependent in a position of full free choice to receive care authorized and medically indicated.

Surgical care is no longer limited to acute and emergency conditions but may be rendered in most instances when valid medical indication for the procedure exists. Exceptions include cosmetics and reconstructive surgery; sterilization for multiparity, socioeconomic, or psychological reasons; surgical intervention for correction of infertility or sterility; and care of chronic conditions not in an acute phase.

IDENTIFICATION TIGHTENED

The Medicare identification card, DD Form 1173, should be used when completing claim forms. Physicians are cautioned to examine the card and ascertain that it is currently effective and contains authorization for the dependent to

receive care from private sources. Dependents under ten years of age will have no identification cards and physicians may use those of parents. The ruling also applies to guardians and the serviceman himself.

In emergencies where the dependent has no identification card, care may be rendered to eligible recipients but the attending physician must certify that an emergency existed and submit one of four types of collateral identification. These include a statement by the service person's commander, other official documentary evidence from the uniformed service certifying to care eligibility, a separate statement from the physician that he has personal knowledge of the patient's Medicare eligibility, or the Social Security number or driver's license showing the state by which issued and expiration date.

OUTPATIENT CARE OF INJURIES

Among restored services is outpatient care of wounds, fractures, dislocations, and lacerations not requiring hospitalization. Additionally, Medicare will pay for necessary diagnostic tests and procedures, i. e., x-ray or laboratory service. The patient, however, must pay the physician the first $15 of the fee for each different cause or accident, the exception being that multiple injuries from the same accident are considered one injury for purposes of the patient's payment.

In all such cases, the program will pay costs of care in excess of $15 as provided in the schedule of allowances shown in the *Physician's Medicare Manual, Second Edition*. Unless the injury qualifies as an emergency, dependents residing with service sponsors must obtain a permit.

ACUTE EMOTIONAL DISORDERS

Hospital care of acute emotional disorders certified by physicians as constituting threats to life and health has been restored but a maximum of 21 days inpatient care is imposed. Categories of disorders are limited to emotional conditions which are complications of pregnancy or child birth, acute emotional conditions considered emergencies, and care of nervous and mental disorders during hospitalization for a condition otherwise qualified under Medicare.

Extensions of the 21 day maximum will be made only in rare and exceptional circumstances. These include inability to arrange for the transfer of the patient to other care facilities because of the service sponsor's absence, unavailability of other competent members of the sponsor's family to make similar arrangements, or where the extension is requested for a time minimum necessary to complete the transfer arrangements. Outpatient care of acute emotional disorders is not authorized.

NON-ACUTE MEDICAL CONDITIONS

While care of all acute medical conditions in the hospital is fully payable, certain non-acute care is banned for payment. Included are tests for infertility or sterility, diagnostic procedures resulting in a finding of pseudocyesis, diagnostic surveys of non-acutely ill patients or where no hospitalization for authorized surgery follows, rehabilitative and restorative care for congenital or chronic conditions, and treatment of tuberculosis other than in an acute phase. Also unauthorized are tests for psychological, psychometric, or intelligence measure, speech or hearing therapy, remedial reading or orthoptic training, and child guidance therapy.

PHYSICIANS' CERTIFICATES

Ordinarily, only three categories of certificates are necessary to show qualification for payment of care rendered where limitations exist. For emergency care without a permit of a dependent residing with a service sponsor, the physician simply states that ". . . this case was a *bona fide* acute emergency."

For surgical care for which medical indication must be demonstrated, the certificate form is ". . . the care furnished was medically indicated for improvement of function . . ." or ". . . showed clinical evidence of malignancy. . . ." Certification of care rendered for acute emotional disorders is ". . . this condition was one of acute emotional disorder constituting an emergency requiring hospitalization for the life or health of the patient."

Certificates, when brief, may be typed on the Medicare claim, DA Form 1863. When physicians submit special reports in letter form, the certificate may be embodied in the text of the communication.

Diabetes Film

A new diabetes film, "Current Trends in the Conical Management of Diabetes" is now available for medical societies and institutions for local showing.

Prints of the 16 mm film may be secured from the Upjohn Company, Kalamazoo, Michigan, or one of its professional service representatives.

Trustees See Heavy Agenda at Winter Meet

The association's Board of Trustees formally accepted the central office headquarters building addition, set additional plans and policies for the new JOURNAL M.S.M.A., reviewed operational aspects of the Medicare program, studied national and state legislative trends, and made final plans for the 92nd Annual Session at its mid-winter meeting last month.

Dr. H. H. McClanahan, Columbus, board chairman, indicated that the governing body expressed satisfaction with the new west wing built last fall as an addition to the headquarters building. An additional 800 square feet of space for the association's Comptroller Department was provided, including special facilities for the IBM electronic data processing system.

With the initial issue of the JOURNAL, the trustees were told, there were subscribers in all 50 states and two foreign countries, an aggregate with the membership and state subscribers of just under 2,200. The Committee on Publications, an *ad hoc* body of the board, announced plans for early expansion of JOURNAL services and features.

Representatives of the Council on Legislation said that all introductions before the 1960 regular session of the legislature are being monitored on a day-to-day basis with few bills of medical interest having been dropped in the hopper during the first five weeks of the biennial session. M.S.M.A. will sponsor measures on care for the indigent, professional liability statute of limitations, certain civil liability exemption in emergency or accident care situations, and support the new anti-fireworks proposals.

Trustees said that M.S.M.A. policy on vigorous opposition to chiropractic licensure is unchanged and that the association stands in readiness to combat all efforts to secure cultist recognition by the state. It is expected that testimony will be offered during hearings on workmen's compensation changes already pending.

Other items on the heavy agenda included routine review of the association's wide activity scope, administration, ethics, and in-progress studies under board supervision.

M.S.M.A.'s Board of Trustees and general officers took time out from their regular mid-winter meeting for a formal picture. From the left are Dr. W. E. Lotterhos, Secretary-Treasurer; Rowland B. Kennedy, Executive Secretary; Drs. John B. Howell, Jr., vice chairman of the board; H. H. McClanahan, Jr., chairman of the board; C. D. Taylor, Jr., secretary of the board; Lamar Arrington, District 6 trustee; S. Lamar Bailey, District 4 trustee; Lawrence W. Long, speaker of the House of Delegates; C. P. Crenshaw, District 7 trustee; G. Swink Hicks, president-elect; Stanley A. Hill, president; Everett H. Crawford, District 8 trustee; and John G. Archer, District 1 trustee. Dr. N. C. House, District 2 trustee was absent from photo. Scene of meeting is board room in M.S.M.A. headquarters building at Jackson.

A.M.A. Conducts Parley On Aging at New Orleans

The second of four regional conferences on aging sponsored by the American Medical Association was conducted at New Orleans February 17-18 with more than 600 representatives of Arkansas, Louisiana, Mississippi, and Texas organizations registered. Participants included those from agriculture, industry, labor, health, church, education, business, government, and civic organizations.

Five Mississippians had top program assignments in the two-day meet. Dr. M. Q. Ewing, Amory, chairman of M.S.M.A.'s Committee on Aging, served as moderator of a general panel session. Dr. Lawrence W. Long, Jackson, Speaker of the House of Delegates, presided at the February 17 general luncheon and presented the principal speaker of the conference, Dr. Milford O. Rouse, Dallas, past president of the Southern Medical Association, and present Vice Speaker of the A.M.A. Dr. George E. Twente, Jackson, member of A.M.A.'s Council on Legislative Activity, appeared as a speaker on medical society action in the field of aging.

Featured speakers included the Reverend W. Douglas Hudgins, pastor, First Baptist Church, Jackson, and Dr. Marion T. Loftin, Mississippi State University, Starkville.

Dr. Fredrick C. Swartz, Lansing, Michigan, chairman of the A.M.A. Committee on Aging, said the main purpose of the conference was to ". . . explore the opportunities for positive health and meaningful living among older people through exercise of individual, group, and community initiative.

"With 9 per cent of the nation's population now over 65 and the percentage increasing," Dr. Swartz said, "it is important for every American to give thoughtful consideration to the aging process and its implications—to individuals and society alike."

The varied, fast moving program was built around appraising the significance of the longer life span and its impact on individuals and society; analyzing relationships between social, economic, psychological, and physiological factors and the health of older persons; and exploring opportunities and needs created by growing population trends among older persons.

Emphasis was given assessing responsibilities of the individual as well as those of medical and non-medical groups in dynamic approaches to ". . . the new era of aging."

Co-sponsoring, host medical associations for the conclave were Arkansas, Louisiana, Mississippi, and Texas. Other regional conferences are set for March 7-8 at Atlanta and March 30-31 in Baltimore.

SMEB Hints Program Downgrade in Report

The State Medical Education Board, official body charged with administration and supervision of the widely heralded Mississippi rural medical scholarship program, told the 1960 regular session of the Legislature that 357 scholarship awardees have practiced as much as five years during the span of the program. The board's statement was a highlight of its seventh biennial report to the lawmakers.

From among those physicians practicing under contingent obligations of the $5,000 scholarship award are 115 who completed their full five years in approved locations, 181 still in their respective contract fulfillment periods, and 61 who practiced the minimum of two years or more and are paying out balances due with interest. Of the 115 completing contract stipulations, 104 were reported as still practicing in the state.

During the 13-year life of the SMEB program, there have been 609 scholarship participants. In addition to the 357 in practice status, 39 are on military leave, seven are deceased, 46 are in hospital training following graduation, 78 are reported as deviating from contract terms, 26 failed or withdrew from medical school, 55 are presently students, and one was listed in "special circumstances."

Total state appropriations for the program since its inception have been $3.1 million of which about half a million has lapsed unused into the state treasury at the end of fiscal bienniums. The board reported that the 115 physicians completing contract terms cost the state just over $400,000 for 575 man years of medical practice.

The report stated that the board ". . . does feel that changes are needed in the State Medical Scholarship program.

"The medical picture in the state," the statement continued, "has changed. More and better hospital facilities are available. Reliable information reveals that there is no point in the state further than 12 miles distant from a hospital.

Travel facilities are improved both as to highways and means of transportation thus shortening the number of minutes distant from a doctor or a hospital.

"Our state now provides a four-year accredited school of medicine and a fine teaching hospital where the latest in methods, equipment, and other facilities are available."

During full swing of the program, recent biennial appropriations were about $500,000 with an additional $25,000 for administration. In 1958, however, the legislature trimmed funds to about half, earmarking $155,000 for those already in school, $24,000 for public health scholarships, and $50,000 for Negro students. Only one-fifth of the latter was used, the board said, for lack of qualified applicants.

The State Medical Education Board program is administered by a five-member body appointed by the governor. By law, three of the five are named from official capacities, the executive officer of the state board of health, the president of the Mississippi State Medical Association, and the dean of the University of Mississippi School of Medicine.

Presently serving are Dr. D. S. Pankratz, Jackson, chairman; Dr. A. L. Gray, Jackson, vice chairman; Dr. Stanley A. Hill, Corinth; and representing the public at large, C. H. Hawkings, Kosciusko. Mrs. Julia C. Davis, Jackson, is executive secretary.

Dr. Gray Named To Committee

Dr. A. L. Gray, executive officer of the Mississippi State Board of Health, has been appointed by the U. S. surgeon general to serve on a newly-formed advisory committee on venereal disease control.

Dr. Gray is the only state health director on the 18-member committee, made up of the nation's chief epidemiologists, dermatologists, social hygiene experts, laboratory specialists, and researchers.

The Public Advisory Committee on Venereal Disease Control, as the group is labeled, will try to determine the cause of the recent increase in venereal disease in the nation and advise the U. S. Public Health Service on control measures.

As Director of Preventable Disease Control for 20 years prior to taking over the state's top health post, Dr. Gray developed a venereal disease program that received nationwide recognition.

21 Graduates Return For UMC Day

Twenty-one of the 30 University of Mississippi School of Medicine graduates now in practice "came home," for the first University Medical Center Day February 5.

Almost that many University Hospital former house staff joined the school alumni and faculty, their wives and guests, at a dinner in the Heidelberg Hotel to wind up the day's activities.

A premiere showing of the Center's new closed circuit television for teaching climaxed the half-day scientific session which opened the first annual homecoming. Presented by the Department of Psychiatry, the demonstration included three cases and covered projected applications of the equipment for teaching purposes.

Earlier, registrants had heard a series of 10-minute papers and attended a Clinicopathologic Conference.

Speaking at the 7:30 p.m. dinner, Dr. E. H. Hobbs urged "functional age" as a yardstick for retirement rather than chronological age. The chairman of the Department of Business Research and Public Administration at Ole Miss, Doctor Hobbs declared that "social and economic death"

"Just a quick tune-up, Doc."

may long precede biological death under present attitudes towards the older person.

Dr. J. Robert Sanvely, assistant dean and professor of medicine, presided at the dinner. Chancellor J. D. Williams summarized the University Medical Center's dramatic growth and outlined plans for the future. Chancellor Williams revealed that a proposed research wing leads the list of anticipated expansion. A request has been made to the state for $1,500,000 to match a like sum from the National Institutes of Health to finance construction.

In welcoming those attending the first UMC Day, Dr. D. S. Pankratz, director and dean, said that 30 of the school's 130 graduates are now in practice, 29 in Mississippi. Sixty-two are interning, he said, while 38 are either in residencies or in the armed services.

Heart Disease Kills Most Mississippians

Heart disease is still Mississippi's primary killer according to the 1959 annual report of the Mississippi Heart Association just released.

Nearly 49 per cent of all state deaths in the 1958-1959 fiscal year were caused by heart and blood vessel diseases. Cardiovascular disorders claimed 10,527 Mississippi lives, while cancer, the second largest killer, took 2,525. Other major causes of death in the state last year were accidents, 1,379; pneumonia, 909; diabetes, 317; and tuberculosis, 172.

In an effort to control what it terms "Mississippi's number one health problem," the Heart Association spent nearly $50,000 in state grants last year. This amount included funds conserved for eventual establishment of a Cardiovascular Chair at the University of Mississippi School of Medicine. The Association also finances state investigations of medications for hypertension, the cardiovascular effects of anesthetics, kidney function in heart disease, improvements in the artificial heart, anticoagulants, and the importance of fats in high blood pressure.

According to the annual report, the approved budget for 1959-1960 stands at $113,502.45. The 1959 Heart Fund totaled $145,653.91.

Capital Scribe Alleges 'Prescription Payola'

Senator Estes Kefauver, chairman of the senate antitrust and monopoly subcommittee, recently in the news for his investigation of drug prices, may have a new tack for further hearings. A Washington columnist, Drew Pearson, says that Senator Kefauver is receiving complaints that some physicians collect rebates for sending patients to pharmacists.

The inference is that a system of prescription payola operates between druggists and physicians writing Rx's. Kefauver was also said to be looking into reports that some pharmacists provide rent-free office space to physicians in return for prescription business.

Spokesmen for medical organization point out that any division of fees, regardless of guise or arrangement, is unethical. It is not unethical, the spokesmen emphasized, for a physician to dispense drugs so long as there is no exploitation of the patient. In some remote and isolated areas, the doctor is the only sources of medicinals.

Senator Kefauver is expected to conduct further hearings beyond those on pricing of corticosteroids and antibiotics. No announcement has been made officially whether hearings are slated on pharmaceutical distribution practices.

National Cancer Head To Speak Here

Dr. Warren H. Cole, national president of the American Cancer Society, will address a state-county ACS meeting in Jackson on March 31.

Dr. Cole, head of the department of surgery of the University of Illinois School of Medicine, will speak on "Progress in Cancer Research."

The veteran professor is or has been president of the American College of Surgeons, American Association for Surgery of Trauma, Western Surgical Association, Chicago Surgical Society, American Board of Surgery, Society of University Surgeons, Chicago Medical Society, and the Interstate Post Graduate Medical Assembly.

Mississippi physicians are invited to attend the meeting at 2 p.m. in the Victory Room of the Heidelberg Hotel.

'Bureau Bungling' Charged In Narcotics Enforcement

A Colorado senator, John A. Carroll, told a senate judiciary subcommittee that the Bureau of Customs and U. S. Narcotics Bureau ". . . are working at cross purposes in fighting the illicit narcotics traffic from abroad." The issue arose at recent hearings on juvenile delinquency and the effects of narcotics on youthful misdoings.

Narcotics Commissioner Harry S. Anslinger and Assistant Treasury Secretary A. Gilmore Flues testified that their respective agencies have cooperated, not conflicted, in law enforcement. Further, they contended, narcotic addiction in the United States is on the downgrade as a result of the interagency teamwork.

Senator Carroll quoted a west coast narcotics agent, George White, as stating that the Customs Bureau ". . . was adopting a 'dog in the manger' attitude toward curbing drug smuggling from Mexico." Carroll told the subcommittee he was ready to join in ". . . trying to knock some heads together to cure any bureaucratic bungling."

Neither Anslinger nor Flues would concede any interbureau jealousy or conflict of purpose. They emphasized effectiveness of their teamwork, offering examples of success in halting narcotics smuggling.

The Home: A Most Dangerous Place

Despite ever increasing air and automotive power, the most dangerous place to be is still the home. Home accidents claim almost 28,000 lives annually, nearly one-third of all accident fatalities.

Falls were shown to be the big culprit in a recent Metropolitan Life Insurance Company review of home accidents. The study covered policyholders killed at home during 1956 and 1957. Out of the 1,468 home accidents reviewed, falls accounted for half. Fires and other burns claimed an additional one-fourth of the total, and the remaining deaths were largely attributed to poisoning and firearm injuries.

Elderly persons constituted a majority of the fall victims. One third were in the age range 45-64 years and about half were 65-74 years of age. The predominant type of fall was on stairs or steps. However, almost one sixth of the victims slipped while walking around a room or going from one room to another on the same level. A number of persons were fatally injured when they fell from windows, ladders, porches, roofs or beds.

Fires and burns, the second largest killer, accounted for 401 of the study's 1,468 deaths. The majority of these deaths resulted from the burning of the home due to undetermined causes. Smoking claimed a number of victims—mostly men who were smoking in bed or an upholstered chair. Men were also the primary victims of explosion of cooking, waterheating or space-heating equipment. However, more women than men were killed by clothing catching on fire. Explosion of flammable liquids, scalding, and fire caused by faulty electrical wiring accounted for the rest of the deaths in this category.

Gas poisoning was responsible for 6 per cent of the deaths in the study, and injury by firearms for a slightly smaller proportion. Both claimed more male than female victims. The majority of fatalities caused by solid or liquid poisoning were due to an overdose of barbiturates, bromides, and similar products. Other types of home accidents accounting for an appreciable mortality were choking by food or objects, strangulation, and drowning.

"They're all filter . . . no tobacco."

New Members

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

HAMRICK, JOSEPH THOMAS, Hazlehurst. Born Meridian, Mississippi, October 4, 1933; M.D., University of Tennessee, Memphis, 1957; interned Charity Hospital, New Orleans, Louisiana; elected December 8, by Tri-County Medical Society.

MCKINLEY, ROBERT LOUIE, JR., Bay St. Louis. Born Meridian, Mississippi, November 25, 1929; M.D., University of Mississippi, Jackson, 1958; interned Nashville General Hospital, Nashville, Tennessee; elected November 4, by Coast Counties Medical Society.

MEENA, ALBERT LLOYD, Jackson. Born Clarksville, Mississippi, July 5, 1927; M.D., University of Indiana, Indianapolis, 1954; interned John Gaston Hospital, Memphis, Tennessee; surgical residency, University of Mississippi Teaching Hospital, Jackson, Mississippi, four years; U. S. Navy 1945-1946; elected November 3, by Central Medical Society.

PIERSON, HENRY EARL, Crosby. Born Jurtsboro, Alabama, March 19, 1933; M.D., University of Tennessee, Memphis, 1958; interned Hospital Division, Medical College of Virginia, Richmond; elected December 1, by Amite-Wilkinson Counties Medical Society.

ROBERTSON, ROLAND BURLSON, JR., Taylorsville. Born Taylorsville, Mississippi, February 17, 1934; M.D., University of Tennessee, Memphis, 1958; interned John Gaston Hospital, Memphis, Tennessee; elected December 10, by South Mississippi Medical Society.

WAITES, JAMES CHAPMAN, Laurel. Born Centreville, Mississippi, March 11, 1934; M.D., University of Mississippi, 1958; interned University of Mississippi Teaching Hospital, Jackson, Mississippi; elected December 10, by South Mississippi Medical Society.

MHMS Raises Coverage

Mississippi Hospital and Medical Service has increased its coverage for senior citizens by offering a Catastrophic Illness Endorsement.

Under the Senior CIE program, persons over 65 may be covered for cancer and ten other diseases including polio, rabies, leukemia, smallpox, diphtheria, scarlet fever, tetanus, spinal meningitis, encephalitis, and tularemia.

Anyone over 65 is eligible if his present Blue Cross-Blue Shield does not include the Senior CIE protection, if his present Catastrophic Illness Endorsement does not include cancer, if he is joining Blue Cross-Blue Shield for the first time, and if he has not had cancer.

The Mississippi plan is again offering senior contracts for a 45-day period, March 15 through April 30.

Home Care Workshop Planned

A Home Care Workshop, sponsored by the American Hospital Association, is scheduled for April 20, 21, and 22, in Chicago.

Cooperating agencies for the workshop are the U. S. Public Health Service, the American Medical Association, and the Blue Shield and Blue Cross Commissions.

"Frankly, Mrs. Smith, telling people that I've been treating your stomach trouble for thirty years isn't quite what I consider putting in a good word for me."

MEETINGS

NATIONAL AND REGIONAL

American Medical Association, June 13-17, 1960, Miami Beach. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago 10, Ill.

American College of Surgeons, October 10-14, 1960, San Francisco. William E. Adams, Secretary, 40 E. Erie St., Chicago 11, Ill.

American Society of Internal Medicine, April 1-3, 1960, San Francisco. Mr. Robert L. Richards, Executive Director, 350 Post Street, San Francisco 8, Calif.

American Academy of General Practice, March 19-24, 1960, Philadelphia. Mr. M. F. Cahal, Executive Secretary, Volker at Brookside, Kansas City 12, Mo.

Southern Medical Association, October 31-November 3, 1960, St. Louis. Mr. V. O. Foster, Executive Secretary, 2601 Highland Ave., Birmingham 5, Ala.

Gulf Coast Clinical Society, October 12-13, 1960, Biloxi, Mississippi. George W. Rogers, Secretary, P. O. Box 37, Handsboro, Miss.

STATE AND LOCAL

Mississippi State Medical Association, May 10-12, 1960, Jackson. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson, Miss.

Mississippi Academy of General Practice, September 28-29, 1960, Jackson. Miss Louise Lacey, Executive Secretary, Walthall Hotel, Jackson, Miss.

Amite-Wilkinson Counties Medical Society, First Tuesday March, June, September, December. S. E. Field, Centreville, Miss., Secretary.

Central Medical Society, First Tuesday Monthly, 6:30 p.m., Robert E. Lee Hotel, Jackson, Miss. C. G. Sutherland, 918 N. State St., Jackson, Miss., Secretary.

Claiborne County Medical Society. D. M. Segrest, Port Gibson, Miss., Secretary.

Clarksdale and Six Counties Medical Society, Fourth Wednesday March and September, 2:00 p.m., Clarksdale, Miss. Robert R. McGee, 150 Yazoo St., Clarksdale, Miss., Secretary.

Coast Counties Medical Society, First Wednesday March, June, September, and November. Charles N. Floyd, 1412-23rd Ave., Gulfport, Miss., Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Miss., Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando, Miss. L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Miss., Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Monthly, 7:30 p.m., Natchez Country Club, Natchez, Miss. W. T. Colbert, 539 Park Place, Natchez, Miss., Secretary.

North Central District Medical Society, Second Wednesday March and September. W. A. Middleton, 214 Summit St., Winona, Miss., Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December. Tupelo, Miss. Eugene M. Murphey, III, 421 Main St., Tupelo, Miss., Secretary.

North Mississippi Medical Society, First Thursday January, April, and October, Oxford, Miss. R. L. Wyatt, Holly Springs, Miss., Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. George B. Stewart, 215 Kirkwood St., Picayune, Miss., Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. Thomas F. Puckett, 715 Arledge St., Hattiesburg, Miss., Secretary.

Tri-County Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Miss., Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg, Miss. Thomas H. Mitchell, The Street Clinic, Vicksburg, Miss., Secretary.

BLOOD DYCRASIAS

A.M.A.'s Council on Drugs released a report tabulating more than 500 therapeutic and other agents involved in blood dyscrasias. Each was studied as to causal relationship in production of pancytopenia, thrombocytopenia, leukopenia, and anemia. There are now officially listed 857 such studies in the A.M.A. Registry on Blood Dyscrasias.

LETTERS

HOW MANY SERPENTS?

SIRS: Congratulations—it's a beautiful first issue; it would be even if it were the hundredth! I like the color on your contents page particularly. Only fly in the ointment is the caduceus, which really can't be justified as a medical emblem, you know.

HARRY L. ARNOLD, JR., M.D.
EDITOR
HAWAII MEDICAL JOURNAL
HONOLULU, HAWAII

SIRS: We wish to most heartily congratulate you on your obstetrical skill in birthing such an outstanding child as the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION. You and everyone participating in the production of this magnificent journal should be justly proud of your achievement.

I sincerely hope you will profit by our experience in the use of the caduceus symbol or emblem. We, for many years, used the double snake entwined around the rod or staff, thinking this represented the staff of Aesculapius, the God of Medicine. However, we found that we were in error and changed it to one snake which truly represents the God of Medicine. The two snake caduceus is the emblem of the Medical Corps, U. S. Army.

C. GRENES COLE, M.D.
GENERAL MANAGER
LOUISIANA STATE MEDICAL JOURNAL
NEW ORLEANS, LOUISIANA

Both Drs. Arnold and Cole are eminently correct, but the caduceus is widely—if incorrectly—used in representing medical organizations, particularly in the United States, France, and Great Britain. See page 110.—Ed.

NEW JOURNAL COMMENTARY

SIRS: Congratulations on your new JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION. We have received our copy and we are delighted with it.

J. P. SANFORD
EXECUTIVE SECRETARY
KENTUCKY STATE MEDICAL ASSOCIATION
LOUISVILLE, KENTUCKY

SIRS: Please accept the congratulations and best wishes of all of us who work on the *Pennsylvania Medical Journal* upon the first issue of what we can easily see will be a very successful Journal.

CARL B. LECHNER, M.D.
MEDICAL EDITOR
PENNSYLVANIA MEDICAL JOURNAL
HARRISBURG, PENNSYLVANIA

SIRS: Congratulations on your first issue of the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION. This is an excellent step for the Association to take.

J. E. BALLENTINE
EXECUTIVE DIRECTOR
TENNESSEE STATE MEDICAL ASSOCIATION
NASHVILLE, TENNESSEE

DEATHS

ADKINS, GEORGE ELI, Jackson; M.D., University of Kentucky, Louisville, 1908; internship and four years residency Eye, Ear, Nose, and Throat Hospital, Chicago, Illinois; one of the founders of the old Jackson Infirmary; Fellow, American College of Surgeons; certified by American Board of Otolaryngology, 1927; member American Academy and Mississippi-Louisiana Chapters of Ophthalmology and Otolaryngology; member American Radiology Society; member Southern Medical Association; died January 12, 1960, aged 78.

AINSWORTH, JOHN BYRD, Raymond; M.D., Mississippi Medical College, Meridian, 1919; postgraduate work at Chicago Post Graduate School, Tulane University, and Vanderbilt University; served as part-time Health Officer of Rankin County 1926-36; died January 14, 1960, aged 76.

CARTER, JAMES JOHNSTON, Biloxi; M.D., Tulane University, New Orleans, 1921; interned Touro Infirmary, New Orleans, Louisiana; residencies St. Louis Southwestern Railway Hospital, Texarkana, Arkansas and Texas, three years, and Eye, Ear, Nose and Throat Hospital, New Orleans, one year; member Pan American Ophthalmological Association; served as Lieutenant in World War I; died at Baptist Hospital, New Orleans, Louisiana, January 1, 1960, aged 68.

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1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957.
2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

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Inpatient Care Institutions Listed

The American Hospital Association is currently offering a listing program for inpatient care institutions other than hospitals, such as nursing homes and homes for the aged.

The listing is not an accreditation program, but has been developed by AHA to aid patients, physicians, and others seeking a suitable facility for care.

In effect since early 1959, the program will regularly list any facility which meets the following requirements:

The institution must have beds for the care of patients who require continuing medical and nursing care, and who stay on the average over 24 hours.

The facility must be licensed by the state and comply with local governmental regulations.

There must be a duly licensed physician or physicians to advise on medical administrative problems, review the institution's plan for patient care, and handle emergencies if the patient's personal physician is unavailable.

Each patient must be under the care of a duly licensed physician and must be seen by a physician as needed.

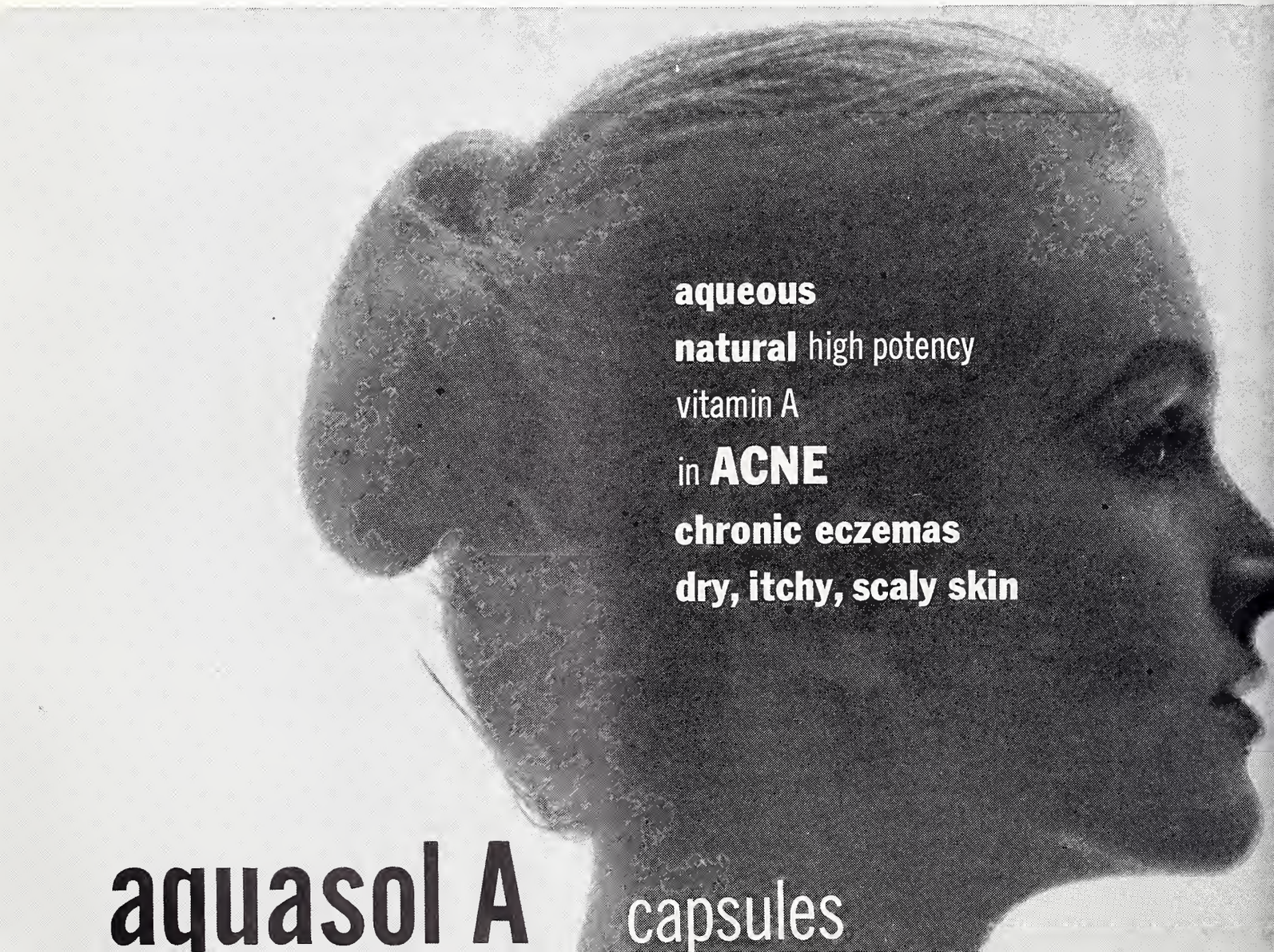
There must be a medical record maintained for each patient including the medical history, physical examination report, diagnosis, physician's orders, progress notes (medical and nursing), and medications and treatments given.

There must be arrangements to regularly and conveniently provide diagnostic services, such as clinical laboratory and x-ray procedures.

The nursing service must be under the supervision of a registered nurse or a licensed practical nurse with a registered nurse regularly serving in a consultative capacity. There must be sufficient nursing personnel to provide patient care 24 hours a day.

Food served to patients must meet nutritional and dietary requirements of the patients.

Nursing homes or other facilities wishing to be listed should contact AHA headquarters for a questionnaire form. On return of this form, an AHA representative will visit the home.



N. Y. County Plans Illness Service

A new Central Illness Service is being developed in Niagara County, New York. Designed as an information registry for physicians, patients, and medical agencies, the Service was proposed when a two-year study of long-term illness and disability in the area revealed a need for coordination among health services.

The agency, planned by the Health Association of Niagara County, Inc., Niagara Falls, New York, will be similar to the five Chronic Illness Information Centers already operating in Chicago, Cleveland, San Francisco, Milwaukee, and Essex County, New Jersey.

As the older centers, the new agency will collect and maintain current data on all community facilities and services for long term care, provide information and referral services to individual physicians, patients and other groups, and promote the development of additional needed services.

Under present plans, the Niagara County Service will be staffed by a medical social worker and a secretary, and will operate under the guidance of a governing council representing physicians, health agency personnel, and lay leaders. Original financial support will be sought from the Community Chest.

The Council on Medical Service of the American Medical Association recently completed a study of the chronic illness information centers in Chicago, Milwaukee, San Francisco, and Cleveland. Copies of this survey report are available from the Council at 535 North Dearborn Street, Chicago 10, Illinois.

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1. Davidson, D. D. and Sobel, A. E.: J. Invest. Derm. 12:221, 1949.

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VARIDASE activates natural fibrinolytic factors, to limit undesirable inflammatory response and speed healing.

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10,000 Units Streptokinase, 2,500 Units Streptodornase.
Supplied: Boxes of 24 and 100 tablets

*Peterman, R. A.: Clinical report cited with permission.

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Tetracycline Phosphate Complex (TETREX®)
U.S. PAT. NO. 2,791,609
in the Therapy of

ACUTE PHARYNGITIS, ESPECIALLY WITH LYMPHADENITIS

Ideally, selection of the proper antibiotic for treatment of acute pharyngitis should await the laboratory reports on the susceptibility of the infecting bacteria. But the busy practitioner who sees many patients a day during the upper respiratory infection season may sometimes find it difficult to avoid the empirical choice of an antibiotic. Unfortunately, this practice may sometimes result in therapeutic failure.

No matter what the pressure of the immediate situation, it is worthwhile to consider taking a bacterial specimen from the infected pharynx for culture and sensitivity studies before starting treatment. Thus, a rational basis will be provided for changing the antibiotic should the first choice prove ineffective.

Which Antibiotic?

All other things being equal, the drug of choice is the one to which the pathogen is most susceptible. But if the exigencies of the situation force the physician to a prompt use of antibiotic, a broad-spectrum preparation that produces immediate high blood levels (e.g., tetracycline phosphate complex, TETREX) probably has the best chance of controlling the pathogen.

Later, the laboratory report frequently may indicate that any one of several antibiotic agents would be equally effective against the particular microorganism in question. In such a case other factors such as frequency and severity of side effects, sensitizing potential and toxicity should be considered.

If the acute pharyngitis in question should be due to gram-negative Klebsiella[1], penicillin will be of no value, nor will erythromycin be effective. However, this organism is susceptible to tetracycline. If the pathogen should turn out to be gram-positive Streptococcus or Staphylococcus, then penicillin, erythromycin, and tetracycline may all be effective against it.

Penicillin, however, in addition to having a limited spectrum, also causes many minor and some serious sensitivity reactions. In a recent survey[2] it was found that penicillin produced severe skin reactions. But most important was the observation that anaphylactic shock, with a fatality rate of about 9 per cent, was the most frequent serious reaction. Such severe reactions are almost always associated with parenteral administration.

The tetracyclines (e.g., TETREX) have the advantages of a broad range of antimicrobial activity and low toxicity. And in addition, the physician does not have to trouble himself or his patients with repeated blood studies when he prescribes TETREX. Minor reactions such as gastric upsets or mild skin rashes occur occasionally. The most serious side effects are staphylococcal and monilial overgrowth, but these are rare and can be adequately controlled.

Some Microorganisms Susceptible[a] *to Tetracycline* (TETREX)[b]

Streptococcus; Staphylococcus; Pneumococcus; Gonococcus; Meningococcus; *C. diphtheriae; B. anthracis; E. coli;* Proteus; *A. aerogenes; K. pneumoniae;* Shigella; Brucella; *P. tularensis; H. influenzae; T. pallidum;* Rickettsiae; Viruses of psittacosis and ornithosis, lymphogranuloma inguinale, primary atypical pneumonia; *E. histolytica; D. granulomatosis.*

[a] Some strains are not susceptible.

[b] Table adapted from Goodman, L. S., and Gilman, A.: The Pharmaceutical Basis of Therapeutics, 2nd edition, New York, The Macmillan Co., 1956, pp. 1322-1323.

High blood, body fluid, and tissue levels of active drug are quickly attained when the new phosphate preparation of tetracycline (TETREX) is used.

The semisynthetic tetracyclines have been in constant use since they were introduced in 1952. They have been proved clinically and have established themselves as safe, effective, and valuable antibiotic agents. But the final decision, the choice of agent, and the control of therapy must remain where it has always been, in the hands of the individual physician.

References: 1. Zinsser, H.: A Textbook of Bacteriology. 11th edition, New York, Appleton-Century-Crofts, 1957, p. 409. 2. Welch, H.: Lewis, C. H.; Weinstein, H. I., and Boeckman, B. B.: Severe reactions to antibiotics. A nationwide survey. Antibiotic Med. & Clin. Ther. 4:800 (December) 1957.

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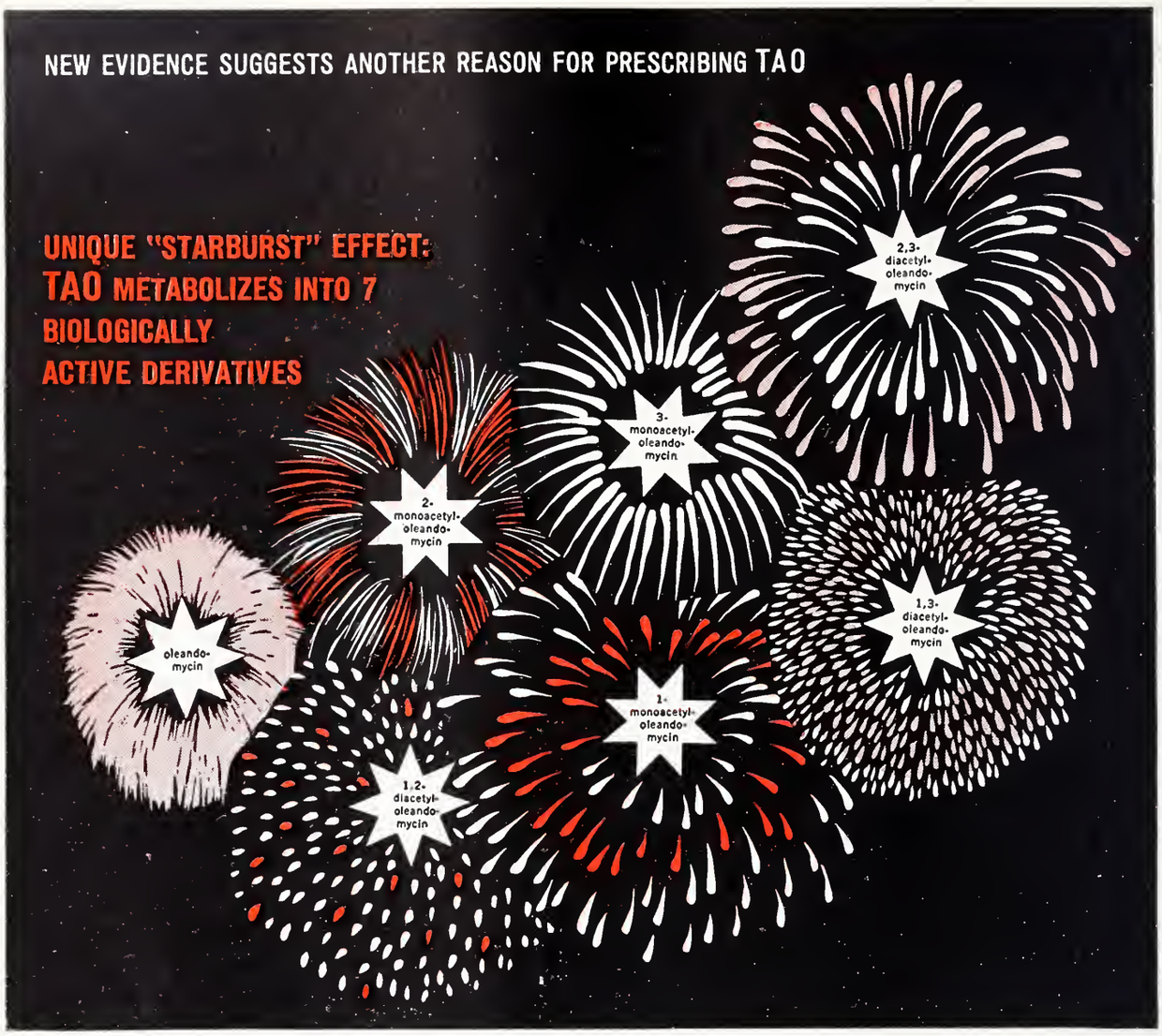

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1. English, A. R., and McBride, T. J.: Proc. Soc. Exper. Biol. & Med. **100**:880 (Apr.) 1959. 2. Celmer, W. D.: Antibiotics Annual 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 277. 3. English, A. R., and Fink, F. C.: Antibiotics & Chemother. **8**:420 (Aug.) 1958.

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Volume I
Number 4
April 1960

JOURNAL of the Mississippi STATE MEDICAL ASSOCIATION

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NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

April 1960

Dear Doctor:

Labor's pressure crusade for enactment of Forand legislation is keeping federal medicine the top issue before Congress. While the Senate made headlines in round-the-clock debate on civil rights, more mail on the Forand bill came to congressmen than on any other subject.

> United Press International said a survey of senators' offices showed letters on civil rights running in fourth place to Forand proposals, postal pay raises, and veterans benefits. Campaign by AFL-CIO has been unbelievably intense. Worst development has been fear in Republican camp that administration must counterpropose a similar program.

Two distinguished physicians, both officers of Southern Medical Association, died within the month. Dr. Tom D. Spies, SMA president-elect, died at New York following a long illness and Dr. Mercer G. Lynch, chairman-elect of Southern's EENT Section, died at his home in New Orleans. Both were frequent visitors to Mississippi medical meetings.

A new Medicare manual will be turning up in every Mississippi physician's mail soon with full details on recently expanded program. A simplified, illustrated format will save busy doctors' time and serve as a handy guide to secretaries preparing claims. Latest innovation in program is omission of fee schedule - doctors are asked to bill prevailing private fees.

Mississippi's capital city has a hospital building boom with 579 new beds under construction and another 28 in the offing. Baptist is adding a $560,000 unit of 44 beds and new emergency room facilities while St. Dominic's program will include new educational building, nurses dormitory, and 35 more beds. VA is building 500 beds and University hospital has prospect of adding 28 psychiatric beds. When completed, Jackson will have almost 1,500 beds in four hospitals.

Almost lost in the congressional shuffle is a new bill proposing VA care for gold star mothers. Introduced by Mr. Lane of Massachusetts, the measure, H.R. 9735, would permit inpatient care for any woman whose child died while a member of armed services.

Sincerely,

Rowland B. Kennedy
Executive Secretary

Liquor, Church Property, Compensation Biggest Legislative Issues

Jackson - The regular session of the legislature hassled long and hard over liquor and the controversial church property bill in both houses. Six of the package-of-eight workmen's compensation bills have been passed, mostly with crippling amendments, netting little change in the law. On MSMA recommendation, the $250 limitation for hernia repair has been repealed. MSMA testified against HB 276, labeling of human blood by race - same old issue as in 1958.

'Medical Fee Guide' Promotion Being Worked Again

Stanford, California - An old dodge in a new overcoat is being circulated among Mississippi physicians: The so-called "Medical Fee Guide," offered at $20 by Medical Fee Guide Publication, formerly calling itself the National Medical Fee Bureau. Purchasers may wish they had their money back because AMA says it's "...primarily a set of workmen's compensation fee tables."

Mississippi Editor Catalogues Howling Hubert

Forest - Scott County Times editor Erle Johnston, Jr., one of the Southland's really oustanding journalists, pegged Hubert Humphrey, civil rights and Forand promoter par excellence, as "...more mouth than man" in a recent incisive editorial. Said editor Johnston: "In 1959, Senator Humphrey took up 629 pages in the Congressional Record or 5.5% of the total Senate space." Of 140 days of Senate sessions, Humphrey took the floor to talk during 109 of them. "He's worse than a parrot," says Mr. Johnston who observes that "...at least a parrot occasionally repeats something worthwhile."

Illness Faker Flim-flams Mississippi Hospitals

Jackson - A man calling himself Joseph Nemeth needs no Hilton or American Express hotel credit cards - he gets first class accommodations in hospitals on phony illness claims. In Greenville, as at Columbus, Nemeth turned up at the hospital saying he had severe stomach pains. After a comfortable night and hearty meals (allowed after negative findings), he quietly slipped out. He worked the ruse in Vicksburg then tried it in Jackson only to end up in the Hinds County jail. Pattern of his approach is claim of acute condition and story that his family was killed in Yellowstone earthquake last year.

Dermatologist Warns Of 'Musical Ailments'

New York - Dr. Louis Tulipan, emeritus professor of dermatology at N.Y. Hospital, says the sound of music may put junior in hospital. Quoted by Cowles authoritative Insiders Newsletter, Dr. Tulipan warns "bass fiddle hand," blistered fingers; tongue muscle spasm for wind instrument players; finger tip calluses and cramps for those performing on string instruments; eczema patches and inflamed nails on piano players; and drummers with ruptured tendons and muscle cramps.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
April 1960, Vol. I, No. 4

ORIGINAL PAPERS

Techniques and Complications of Spinal Anesthesia

L. W. FABIAN, M.D., M. A. CARNES, M.D.,
and D. P. SMITH, M.D.

Jackson, Mississippi

The general principles of techniques in relation to the prevention and treatment of complications which may arise during and after the spinal anesthetic procedure are reviewed.

Special emphasis is placed on the necessity for atraumatic lumbar puncture, strict asepsis, and proper use of resuscitative equipment and drugs.

Contraindications for spinal anesthesia in patients with spinal cord disease or in hemorrhagic shock are discussed.

SPINAL ANESTHESIA, in spite of occasional severe criticisms, remains one of the safest and simplest methods of providing maximal relaxation and analgesia at minimal risk to the patient. Like any other procedure in medicine, however, this technique can only be as safe as the individual who administers the anesthetic. Indeed, many of the so-called "complications of spinal anesthesia" might be termed more accurately "complications of the spinal anesthetist." For this reason it is well to review periodically certain fundamental features of lumbar puncture and subarachnoid injection of anesthetic drugs. Of equal importance is frequent emphasis concerning the immediate availability of resuscitative equipment and drugs and the familiarity of the anesthetist with the usage of these items.

In performing spinal anesthesia it is imperative that one possess a good general knowledge of the anatomy of the spinal column. Lack of utilization of this knowledge is perhaps the major cause of failure to produce the desired results. Furthermore, neurologic and other complications are more likely to occur when certain anatomic features are ignored.

From the Department of Anesthesiology, University of Mississippi School of Medicine.

Read before the 11th Annual Scientific Assembly, Mississippi Academy of General Practice, Jackson, September 23-24, 1959.

Secondly, the pharmacologic, physical, and chemical properties of the anesthetic drug to be used must receive careful attention in considering dosages and desired levels of anesthesia. Of great importance in this respect is the specific gravity of the anesthetic solution as compared with the specific gravity of cerebrospinal fluid.

Finally, the immediate recognition and treatment of untoward responses to subarachnoid block demand careful consideration.

Anatomical Features To assure proper placement of the needle with minimal trauma, it is important to keep in mind the normal spinal

curvature, the angulation of spinous processes in the lumbar area, the ligamentous structures encountered, the inferior extent of the spinal cord and dura, and the width of the canal (Figs 1-4).

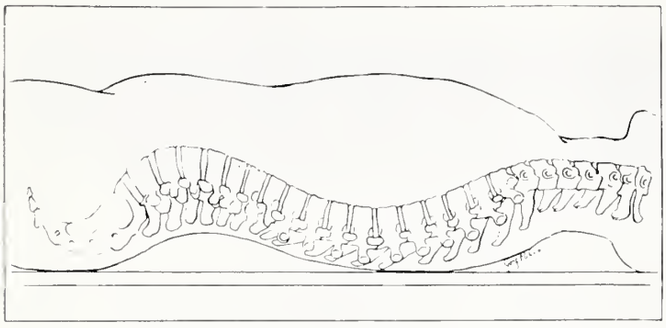

Figure 1. The vertebral column. The curves are normal for a subject in the standing position, but are decreased when the patient lies on his back since the spinal column tends to straighten in this position. (Courtesy of John J. Bonica and the Lea and Febiger Company, Philadelphia.)

Necessary Equipment and Drugs A special tray containing the essential items for lumbar puncture and anesthesia is illustrated in Figure 5. This tray includes material to be used for cleansing and draping the lumbar puncture site, needles for intradermal anesthetization and lumbar puncture, and the anesthetic drugs. The tray including the drugs is autoclaved. It should be emphasized here that cold sterilization of ampoules used in spinal anesthesia is to be condemned.

Perhaps the most popular and satisfactory anesthetic drug for subarachnoid block is tetracaine hydrochloride (Pontocaine HCL®). Procaine and Dibucaine HCL (Nupercaine®) are utilized also to a considerable extent. In Table I dosages of tetracaine and procaine are listed with expected levels of anesthesia. Dibucaine is used primarily for perineal anesthesia in a dosage of 2.5 mg. Duration of anesthesia can be prolonged by the addition of vasopressor drugs in the anesthetic solution. A few of these are listed also in this table.

Utilizing the information contained in the preceding paragraph, the actual technique of lumbar puncture and injection of anesthetic drugs into the subarachnoid space can be outlined.

Prior to administering the spinal anesthetic, an intravenous infusion should be started and a blood pressure cuff should be applied. It is important to have ready access to a vein in case the administration of vasopressors becomes imperative. The blood pressure should be taken prior to positioning the patient for lumbar puncture in order to establish a base line from which variations in pressure may be determined.

Positioning of Patient Establishing and maintaining proper alignment of the spinal column preparatory to lumbar puncture are of fundamental importance. Correct and incorrect placement for the lateral and sitting positions are illustrated in Figures 6 and 7. The latter position is used primarily in those instances where only perineal anesthesia (saddle block) is desirable. Occasionally, however, the sitting position has been utilized in these cases where lumbar puncture in the lateral position has been impractical for any reason.

After proper positioning of the patient, the lumbar puncture site is chosen. The interspaces at L-3 and L-4 levels are utilized most commonly

TABLE I

DOSAGES OF ANESTHETICS AND VASOPRESSORS IN HYPERBARIC SPINAL ANESTHESIA

Anesthetic Level	*Pontocaine* Dosage*	*Procaine Dosage*	*Epinephrine Dosage*	*Neo-Synephrine Dosage*	*10 Per Cent Glucose Added*	*Total Volume*
Saddle Block	5-6 mg	50 mg	0.2 mg	2 mg	0.6 cc	1.2 cc
Lower Extremity		100 mg	0.3 mg	3 mg	1.2 cc	2.0 cc
T-10	8 mg					
Lower Abdomen		125-150 mg	0.4 mg	4 mg	2.0 cc	3.0 cc
T-6 to T-7	10-12 mg					
Upper Abdomen		150-200 mg	0.5 mg	5 mg	3.0 cc	4.0 cc
T-4 or above	12-14 mg					

* If ampoules containing powder or crystals of the anesthetic drug are used, a solution may be made with spinal fluid or saline before adding the volume of 10 per cent dextrose listed above. Total volume injected should not exceed that given in the table.

but the interspace at L-2 may be preferable on occasion. Needle punctures above the L-2 interspace are fraught with danger since the spinal cord extends to the upper border of the second lumbar vertebra. The area chosen for lumbar puncture should be shaved whenever hair is present and prepared with a germicidal agent such as aqueous merthiolate or zephiran solution. This cleansing procedure must be performed meticulously to avoid infection along the path of the needle. Detergents should not be used for cleansing of either the back or of any equipment to be used in the procedure. These points will be discussed in greater detail.

During the processes of palpation of landmarks and cleansing of the area, the patient should be forewarned concerning exertions of pressure by the palpating hand, the application of cold solutions on his back and particularly the insertion of the intradermal needle. Explanations concerning the procedure at hand can do much to obtain the patient's cooperation in maintaining proper position and relaxation.

After the prepared area is draped with towels or special drapes designed for this purpose, the exact center of the previously chosen interspace is determined and an intradermal wheal is raised at that point. Generally no further preliminary anesthetization is required for lumbar puncture if the procedure is performed properly.

PROPER NEEDLE

The needle most commonly used is 3½ in. in length and has a short bevel to avoid only partial subarachnoid placement. The size of the needle is also important. Usually a No. 20 or 22 gauge needle is satisfactory although some authors advocate the use of No. 26 or 27 gauge sizes to minimize the opening in the dura through which leakage of cerebrospinal fluid might occur for some time following puncture. Disadvantages in the use of smaller gauge needles concern lack of appreciation of resistances offered by the ligaments and dura mater and difficulty in assuring uniform flow of cerebrospinal fluid through the needle.

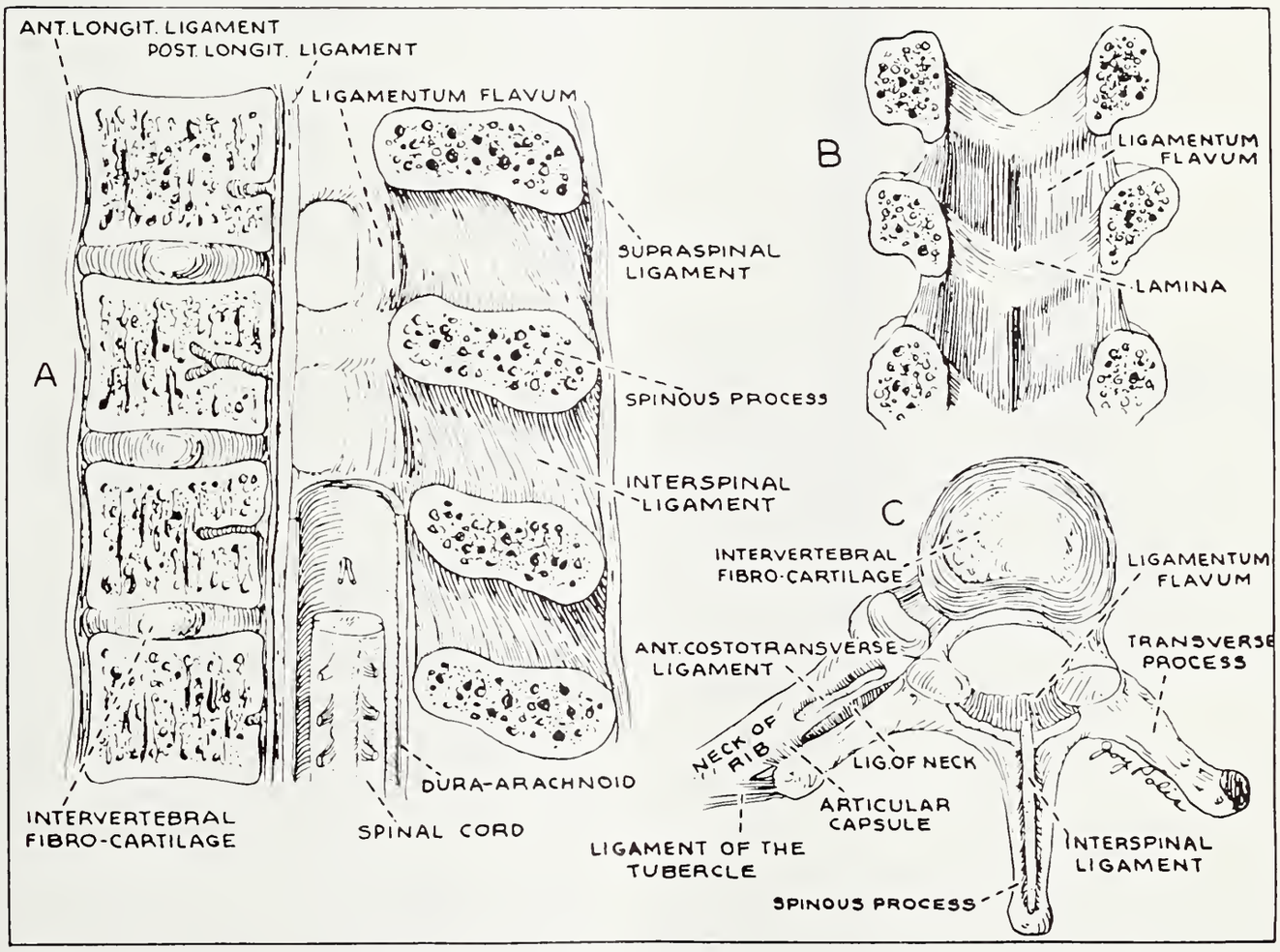

Figure 2. The ligaments of the vertebral column and ribs. (Courtesy of John J. Bonica and the Lea and Febiger Company, Philadelphia.)

In achieving proper placement of the needle the following criteria should be observed as illustrated in Figures 6-8.

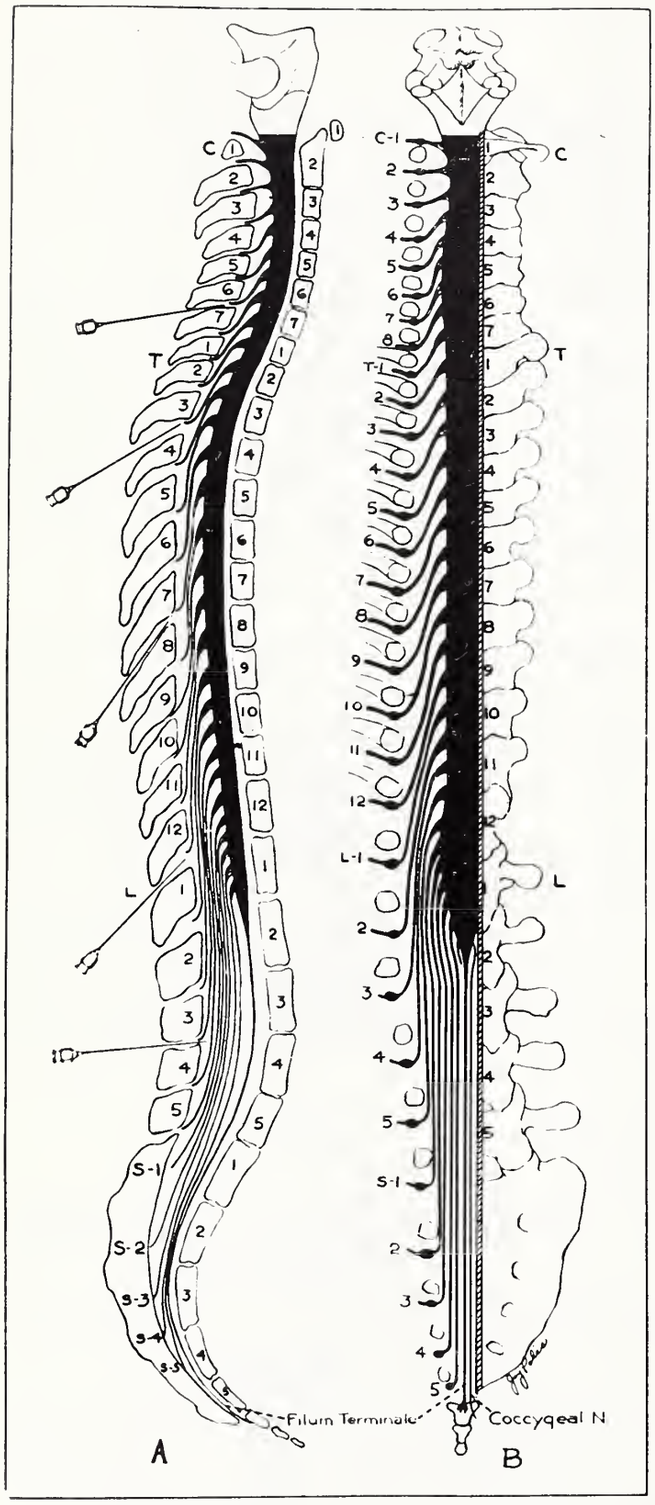

Figure 3. Schematic representation to show relationship of the spinal column, and the spinal cord and its nerves. A, lateral and B, posterior view. Note direction of spinal nerve roots in the various segments. Needles in place showing direction of their axis at various levels. (Courtesy of John J. Bonica and the Lea and Febiger Company, Philadelphia.)

1. The patient must be positioned so as to obtain maximal flexion of the spine thus widening the lumbar interspaces to the greatest possible extent. The shoulders and hips should lie exactly perpendicular to the table.
2. The needle should be held in such a fashion that bending of the shaft does not occur.
3. The point of entry of the needle should be in the exact center of the interspace and introduction should be performed slowly and gently in order to appreciate the resistances offered by the ligamentous structures and the dura mater.
4. Upon entry into the subarachnoid space, the stylet of the needle is removed and the flow of cerebrospinal fluid observed carefully. If rotation of the needle clockwise or counterclockwise through a 360° angle produces a decrease in the flow, corrections should be made before introducing the anesthetic solution. A variation in fluid flow following rotation of the needle infers that the bevel is not completely within the subarachnoid space.

APPEARANCE OF BLOOD

The appearance of blood or blood-tinged fluid at the hub of the needle suggests either lateral placement or excessively anterior position with penetration of the prevertebral venous plexus. In the latter instance, simple slight withdrawal of the needle may provide a clearing of the needle with cerebrospinal fluid. In the former instance, the needle should be withdrawn to the subcutaneous tissue and a new approach made. Injection of the anesthetic drug should never be made if bloody fluid continues to appear.

Should right or left leg paresthesias occur, immediate change of the needle position is indicated to avoid damage to posterior root ganglia. Lateral displacement of the needle is suggested from such complaints and correction should be made prior to injection.

Having assured proper position of the needle within the subarachnoid space, the syringe containing anesthetic solution is attached carefully to the hub of the needle and following aspiration of a small amount of cerebrospinal fluid into the syringe, the injection is made. During the injection of solution it is important that the needle position be stabilized to avoid displacement. Many failures to achieve anesthesia may be traced to incomplete subarachnoid injection.

Upon completion of the injection and removal of the needle the patient is placed in the position required for development of the necessary level of anesthesia. The head of the patient should be elevated by means of a pillow to a point well above the level of the spinal column.

Figure 9 illustrates the distribution of anesthetic solution afforded by changes in the position of the operating table. Perhaps the most critical interval of time for assurance for proper anesthetic level and prevention or treatment of possible complications in spinal anesthesia is the first 5 to 10 min. period following injection. Observation of vital signs and determination of anesthetic levels should be carried out simultaneously since one or more of the following complications may arise:

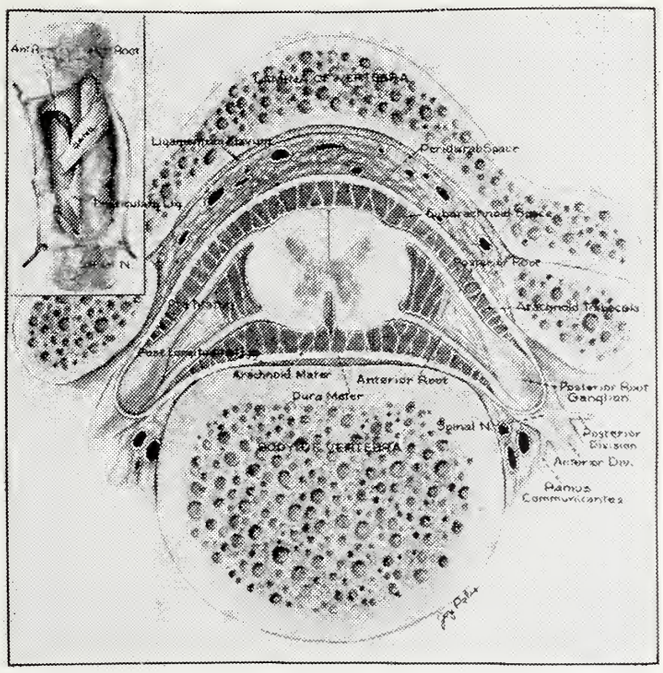

Figure 4. Cross-section showing the spinal cord and its meninges, and the subarachnoid and peridural spaces. The section is between dentate ligaments which are not shown. Inset shows the attachments and coverings of the roots of spinal nerves. (Courtesy of John J. Bonica and the Lea and Febiger Company, Philadelphia.)

COMPLICATIONS

1. Inadequate development of anesthetic levels due to improper positioning of the operating table.
2. Development of an excessive anesthetic level due to exaggerated position following injection of the anesthetic, coughing or straining by the patient, or rough handling of the patient during positioning. Respiratory paralysis may occur as the result of these factors.
3. Hypotension of variable degrees including total peripheral vascular collapse resulting from sympathetic paralysis.
4. Respiratory depression or arrest resulting from excessive anesthetic levels.
5. Occurrence of nausea and vomiting.

Immediate recognition and treatment of these complications are mandatory. Accordingly, the safety of spinal anesthesia depends to a great extent on the availability and proper usage of resuscitative equipment and drugs. These include:

1. An oxygen source and appropriate equipment to provide artificial respiration.
2. Selected vasopressor drugs.
3. Suction equipment.

In addition to these items, equipment for providing safe inhalation anesthesia should be available and all who administer spinal anesthesia should be familiar with the fundamentals of general anesthesia. This is important since the operation may outlast the spinal anesthesia.

HYPOTENSION

Of the complications which may occur during the course of spinal anesthesia, hypotension is perhaps most frequent in occurrence. The severity of decreases in blood pressure parallels to a considerable extent the height of the anesthetic level and profound circulatory depression is not uncommon when dermatome levels of T4 and above are produced. A fall in blood pressure may occur gradually or precipitously and generally the more severe hypotensive episodes are those which occur suddenly. Furthermore, such episodes usually occur within 3 to 5 min. following injection of the anesthetic drug.

Immediate therapy is indicated when the blood pressure falls by 25 per cent or more from the

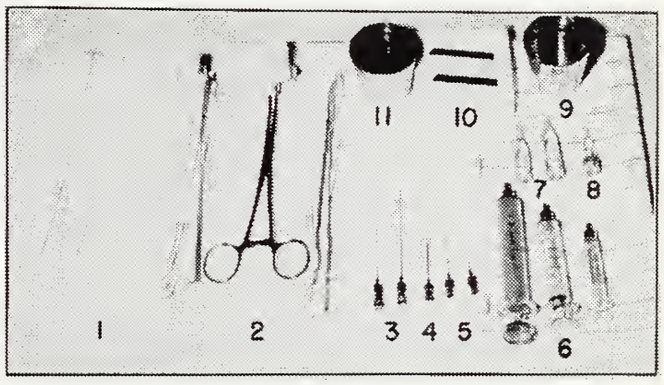

Figure 5. Tray containing the necessary articles for subarachnoid block. (1) Towels, (2) fenestrated spinal sheet with sponge forceps, (3) spinal needles, (4) needle for mixing solutions, (5) needles for infiltration of skin, (6) syringes—10 cc., 5 cc., and 2 cc., (7) ampules containing 1 per cent pontocaine and 10 per cent glucose, (8) ampule containing vasopressor drug, (9) medicine glass containing local anesthetic for infiltration, (10) sponges and files, (11) medicine glass containing antiseptic solution. (Courtesy of John J. Bonica and the Lea and Febiger Company, Philadelphia.)

control reading in any patient. Certain individuals, particularly those with coronary artery disease and other vascular abnormalities, may tolerate poorly even this degree of hypotension. Treatment is directed toward re-establishing efficient systemic circulation by eliminating pooling of blood in the lower extremities and by constricting peripheral vascular beds. An immediate and dramatic rise in blood pressure can be produced by lifting the patient's legs above the level of the heart. Sustaining the blood pressure at reasonable levels for longer periods of time may require the use of vasopressor drugs such as ephedrine or methoxamine. When hypotension is severe, intravenous administration of these compounds is necessary due to the time lag required for absorption from muscle. Indeed the absorptive power is greatly diminished during profound circulatory depression and intramuscular injections may not prove effective.

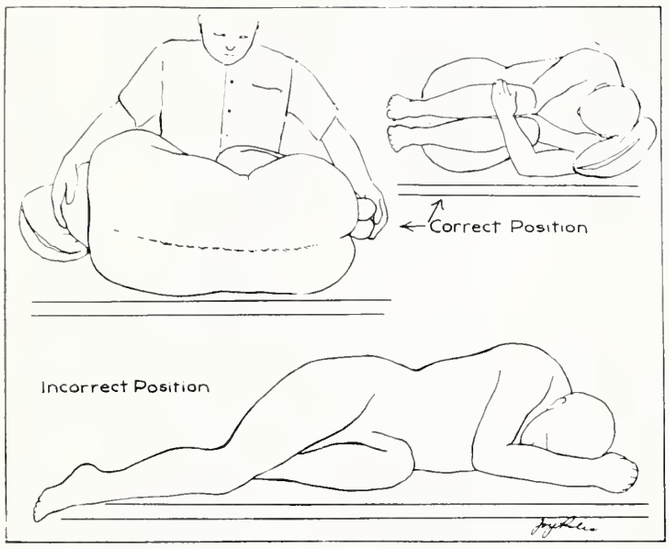

Figure 6. Lateral position for subarachnoid block. (Courtesy of John J. Bonica and the Lea and Febiger Company, Philadelphia.)

OXYGEN ADMINISTRATION

Administration of 100 per cent oxygen by bag and mask is an important part of the therapy of hypotension and assures maximal arterial oxygen saturation if respiration is adequate. If respiratory depression has occurred, assistance of respiration is facilitated by the use of this equipment. Respiratory arrest resulting from cervical or medullary anesthesia demands immediate use of this equipment for institution of artificial respiration.

Nausea and vomiting occur not infrequently during spinal anesthesia and the etiology is not altogether clear in some cases. Usually, however, hypotension of variable degrees is the causative factor. Oxygen inhalation, proper restoration of the blood pressure to preanesthetic levels and the use of small intravenous doses of barbiturates are helpful in combatting this complication. Rarely the retching associated with nausea may require supplementary inhalation anesthesia. If such is the case, however, one must be extremely cautious in preventing aspiration of gastric contents during induction of anesthesia.

TOTAL SPINAL ANESTHESIA

The most feared complication and the one requiring most dramatic therapeutic measures is total spinal anesthesia which may occur as a result of rapid injection of large quantities of the anesthetic drug, improper positioning of the patient, coughing or straining by the patient or in cases of severe abdominal distention. Spinal anesthesia administered to the pregnant patient in labor deserves careful consideration in this respect since uterine contractions occurring during injections of the drug may produce very high anesthetic levels by increasing the cerebrospinal fluid pressure. An added factor in such cases concerns the straightening of the lumbar curve which allows development of higher anesthetic levels.

In total spinal anesthesia, respiratory paralysis and peripheral vascular collapse occur rapidly and simultaneously. Artificial respiration with 100 per cent oxygen and support of the circulation with vasopressors must be instituted immediately if survival of the patient is to be expected. Since it is impossible to predict the occurrence of a total spinal anesthetic under certain circumstances, the availability and proper usage of resuscitative materials cannot be overemphasized.

Of the complications which occur 2 hr. or more following spinal anesthesia, headache is

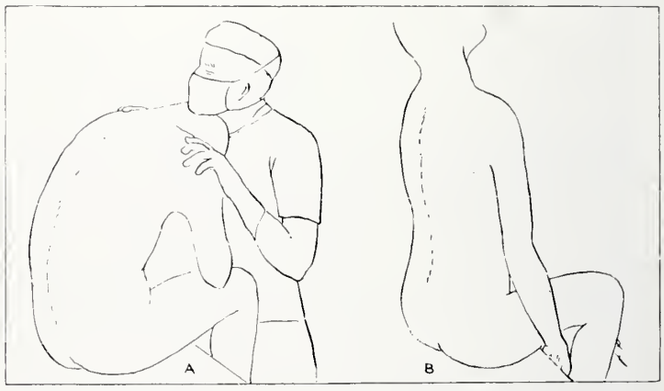

Figure 7. Sitting position for subarachnoid block. A, correct, and B, incorrect position. Note that the assistant's chin rests over the patient's occiput and each hand is grasping a shoulder. (Courtesy of John J. Bonica and Lea and Febiger Company, Philadelphia.)

perhaps the most frequent. This headache is of a specific type in that its location is occipital and its severity depends on posture, being more severe in the sitting position than in the recumbent position. The etiology of the postspinal headache

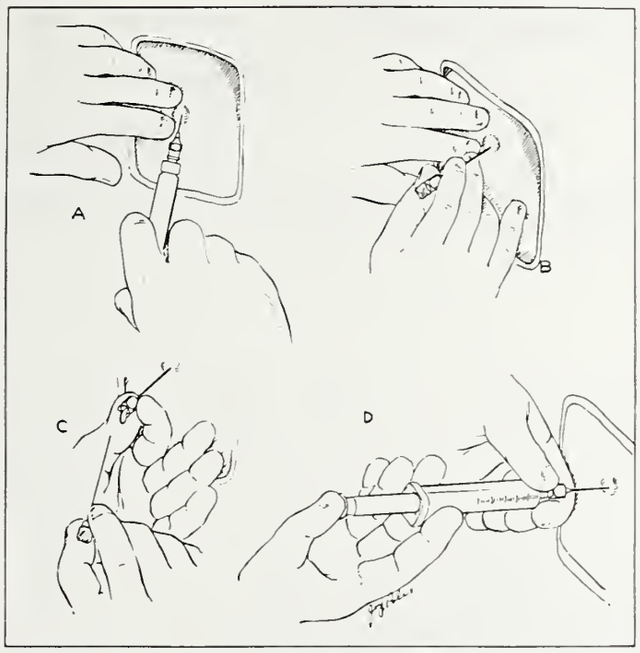

Figure 8. Technic of subarachnoid block. A, formation of skin wheal. Note how skin over the spinous process is held with the second and third fingers of the left hand. B, advancing the spinal needle. C, the point of the needle is in the subarachnoid space. D, injecting the anesthetic solution. Note method of anchoring the spinal needle. (Courtesy of John J. Bonica and Lea and Febiger Company, Philadelphia.)

is still somewhat obscure, but alterations in spinal fluid pressure dynamics induced by lumbar puncture are thought important in its production. The response to therapy directed toward increasing the cerebrospinal fluid pressure, however, is gratifying and tends to substantiate the theory concerning these alterations. In most cases application of pressure to the abdomen or caudal injection of 50 to 75 cc. of saline will provide dramatic relief of the headache.

NEUROLOGIC COMPLICATIONS

Neurologic complications of spinal anesthesia occur rarely but may be of permanent significance when they do occur. Explanations for all such complications cannot be provided but careful study has shown that many of these are preventable.

The most important of this group include cases of ascending paralyses, foot-drop, aseptic meningitis, posterior root damage as a result of trauma, and the cauda equina syndrome.

It has been shown irrevocably that many detergents used for cleaning of needles and syringes and most germicides used in cold sterilization of ampoules can produce the neurologic complications listed above. For this reason, all equipment used in spinal anesthesia should be cleaned by mechanical means and by multiple pressure rinses with tap water followed by multiple distilled water rinses. Clots in needles should be removed by cotton applicators and by passing fine wire through the shaft of the needle.

STERILIZATION OF EQUIPMENT

All equipment and drugs used for spinal anesthesia should be sterilized by autoclaving. Anesthetic drugs and vasopressors used for prolonging anesthesia can withstand two to three autoclavings before deterioration occurs. Cloudy or discolored solutions should be discarded.

Other important measures to be taken in prevention of neurologic complications include:

(1) Rigid asepsis in performance of lumbar puncture.

(2) Avoidance of trauma.

(3) Avoidance of entry into an infected area of the back.

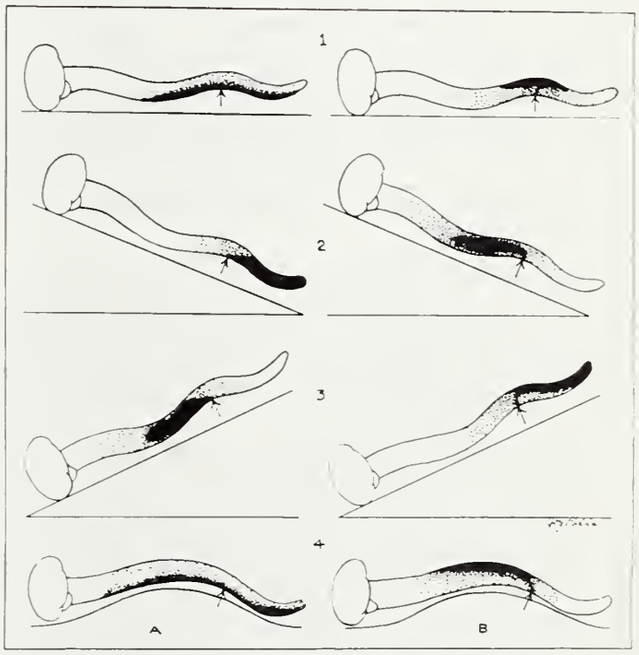

Figure 9. Diagram showing the spread of spinal anesthetic agents injected into the subarachnoid space. Arrow indicates site of injection (3rd lumbar interspace). A, Hyperbaric solutions. B, Hypobaric solutions. (1) Patient in supine position with table level. (2) Patient in supine position with head of the table elevated. (3) Supine position with head lowered. (4) Patient in the prone position with spine flexed. (Courtesy of John J. Bonica and the Lea and Febiger Company, Philadelphia.)

(4) Avoidance of injection of anesthetic drugs at a point where the patient complains of specific paresthesias.

(5) Avoidance of use, whenever possible, of spinal anesthesia for patients suffering from spinal cord disease of any type. Central nervous system lues, tabes dorsales, multiple sclerosis, and pernicious anemia constitute absolute contraindications. Hemorrhagic shock also constitutes an absolute contraindication to spinal anesthesia.

Incompetence of rectal and bladder sphincters following spinal anesthesia is observed occasionally. Generally this complication is of temporary nature and disappears in 24 to 48 hr. Permanent disability, however, can and does occur not infrequently. In such cases, tidal drainage of the urinary bladder and maintenance of bowel cleanliness must be undertaken immediately. Excellent nursing care of these patients is mandatory. ★★★

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Nurses Ask Higher Salaries, Fees, Benefits

The Mississippi State Nurses Association has published new criteria for minimum standards of employment conditions for private, general duty, public and occupational health, and supervisory nurses in Mississippi following action by its 1959 annual meeting at Jackson. A statement of these criteria has been furnished hospital administrators throughout the state.

In a letter of transmittal signed by Matie N. Townsend, R.N., president of the nurses association, it is stated that ". . . a prerequisite to high standards of nursing care is economic security for professional nurses."

"If nurses are paid salaries commensurate with their education, experience, and the service they render, and if they have good working conditions," Mrs. Townsend continued, "they will be economically secure. Secure nurses are more efficient and give their patients better nursing care. On the other hand, if their salaries are inadequate for a standard of living expected of a professional worker, and if their salaries are lower than those in similar professions (teachers and social workers), their poor morale is inevitably, if unconsciously, expressed in patient care."

New criteria being urged for private duty nurses is based on minimum daily and hourly minimum fees, transportation expense, and special fees for certain services. Eight consecutive hours of private duty nursing would be charged at $14 with additional $2 differentials for alcoholics and psychiatric patients. Fees for intramuscular injections would be set at $2, I.V. fluid administration on a hourly basis, and charge of $5 for enemas and catherizations.

For occupational health nurses, salary ranges of $315 to $375 per month were set with shift differentials of 5 per cent for evening and 10 per cent for night. Public health nurses would command salary levels ranging from $285 to $910 monthly and general duty nursing, $300 to $350. In all categories, 40 hour work weeks, vacations, sick leave, holiday time off, a periodic salary increase are proposed.

Other fringe benefits sought include personal health programs with free examinations for nurses consisting of chest x-ray, C.B.C., urinalysis, serological, and physical surveys. A second point urges that ". . . a health and medical service acceptable both to employees and employer shall be established."

The nurses association plan also seeks minimum guarantees in pensions and retirement benefit programs, eating and drinking facilities, lockers and rest rooms, rest periods or breaks, and an annual review of all such policies. Additional agreements are asked that ". . . it shall not be obligatory for the nurse to purchase such prerequisites as rooms, meals, and laundry from the hospital."

The Diagnosis and Management Of Carcinoma of the Uterine Fundus

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Adenocarcinoma, which accounts for 95 per cent of cancer of the uterus, is discussed. Adequate investigation of irregular vaginal bleeding, the primary symptom, includes a careful history, thorough pelvic examination, and a diagnostic dilatation and curettage, according to the author. Awareness of these measures on the part of patient and physician will decrease delay in the management of the disease.

Dr. Newton describes the steps in diagnosis and the definitive studies in determination of the best method of therapy for the individual patient. Appropriate treatment is discussed.

THE BODY OF THE UTERUS is the second commonest site of cancer in the female genital tract. Adenocarcinoma accounts for 95 per cent of these malignancies. An interesting variant of the adenocarcinoma is the adeno-acanthoma; here some of the glandular elements undergo squamous metaplasia and on microscopic examination both glands and squamous epithelium are seen. The behavior of the adeno-acanthoma is similar to that of the more common adenocarcinoma. Other cancers of the fundus include sarcoma, mixed mesodermal tumors, and choriocarcinoma. The present discussion will be confined to the commonest lesion—adenocarcinoma.

CAUSES

The development of endometrial adenocarcinoma has long been linked to abnormal production of sex hormones and particularly of estrogens. For example, 10 per cent to 27 per cent of functioning tumors of the ovary, such as granulosa cell tumors or thecomas, are reported to be associated with endometrial carcinoma.[1] Additional evidence for the possible causal role of estrogens is provided by the fact that many patients with this disease have late menopauses and that it has been possible in experimental animals to produce hyperplasia of the endometrium and even adenocarcinoma by the prolonged administration of estrogens.[2]

Sherman and Wolf[3] have studied ovaries removed from 133 patients with endometrial carcinoma. In 109 (82 per cent) hyperplasia of the hilar (Leydig) cells was found. Furthermore, high circulating levels of the luteinizing (LH) hormone of the anterior pituitary were found in all of 31 patients with endometrial carcinoma so studied. These authors postulate that women who are predestined to develop endometrial carcinoma are endowed at birth with a larger number than normal of LH-responsive hilar cells.

During the reproductive age the excessive effect of the luteinizing hormone is suppressed by the feedback pituitary control of the ovary and the LH restraining effect of progesterone. After the menopause this restraint is removed. The hilar cells, under the influence of LH, may then produce sex hormones of an undetermined type which affect the endometrium and eventually lead to adenocarcinoma. Additional evidence for this attractive, but yet unproved theory can be found from the association of hyperplasia and carcinoma of the endometrium. In Sherman and Wolf's studies hilar cell hyperplasia was found in 23 per cent of patients with postmenopausal (atypical) hyperplasia as compared with 6 per cent of a control group of women.

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Read before the annual meeting of the American College of Surgeons, Mississippi Chapter, Gulfport, September 11-12, 1959.

Carcinoma of the body of the uterus presents the typical picture of an adenocarcinoma. Malignant glands of irregular shape and size are seen. They commonly appear "back-to-back" with the epithelium of one gland directly touching the epithelium of another gland. The lining cells of the glands are crowded; their nuclei are large, irregular in size and hyperchromatic. Many pathologists grade endometrial carcinoma according to the degree of differentiation after Broders' classification. This is of questionable prognostic significance and may be important only insofar as the highly undifferentiated Grade IV lesions may be confused with sarcomas or mixed mesodermal tumors.

CLINICAL PICTURE

Adenocarcinoma of the endometrium usually occurs in the older woman. The average age of patients in most series is 57 to 60 years. Such patients are frequently obese, hypertensive, and may be diabetic. Some doubt has recently been thrown upon the association of endometrial carcinoma and diabetes.[4] It is rare to find a younger woman with carcinoma of the endometrium. The youngest we have seen was an unmarried girl, 30 years of age, who was referred with what was thought to be a cervical polyp. At the time of D and C a polypoid mass was found to be protruding through the external os of the cervix. On pathological examination this proved to be an adenocarcinoma, suggestive of endometrial rather than of cervical origin. When the whole specimen was examined after operation, it was evident that the patient had a carcinoma of the endometrium which had extended down the cervical canal.

The primary symptom of carcinoma of the uterine fundus is vaginal bleeding. This may occur in the form of irregular bleeding at the time of the menopause or as postmenopausal bleeding. It is not usually large in amount and does not follow trauma as does the bleeding from carcinoma of the cervix. A few patients complain only of discharge. Rarely pain or other symptoms are the presenting complaints.

DIAGNOSIS

A high index of suspicion on the part of patient and physician is essential for early diagnosis. An adequate menstrual history is most important. Particular attention should be paid to intermenstrual bleeding and postmenopausal bleeding. Since menopausal bleeding has been found to be due to malignancy in 30 per cent or more of cases, and of these more than half are due to endometrial carcinoma, it is important to define clearly what is meant by postmenopausal bleeding. It is a common assumption that irregular bleeding after a "clear span" of 12 months or more following the last normal menstrual period may be considered as postmenopausal bleeding. Recently, Payne, *et al.*[5] have pointed out that when the "clear span" is reduced to six months, irregular bleeding will still be due to malignancy in 17 per cent of cases. Therefore, it would seem appropriate that any bleeding, which is irregular in nature and different from a normal menstrual period, and which occurs six months or more after the last normal menstruation, should be fully investigated.

The two cardinal points in establishing a diagnosis are the performance of an adequate pelvic examination and obtaining tissue for microscopic examination by diagnostic curettage. There should be no delay in doing a complete pelvic examination on any patient who complains of irregular bleeding. One should not wait until the patient stops bleeding; it may be weeks before she does. Medication, and particularly estrogens, should not be tried in an attempt to stop the bleeding before a definite diagnosis is made. It is very dangerous to make the assumption that irregular bleeding is part of the menopause. At the time of pelvic examination it is often possible to make definite progress towards a diagnosis. For example, if the patient is bleeding, the origin of the bleeding, whether uterine or cervical, may be determined. Enlargement and softness of the uterus may suggest an endometrial carcinoma.

SECOND STEP

The second and most important step in diagnosis is to obtain adequate tissue for pathological examination. This can best be done by thorough dilatation and curettage. In general, irregular menopausal or postmenopausal bleeding is an indication *per se* for D and C. Moreover, this should be performed even if there is an obvious cause for the bleeding such as an endocervical polyp. The technique of dilatation and curettage needs little emphasis. Thorough examination under anesthesia should be performed. The depth and dimensions of the endometrial cavity should be ascertained. Preliminary curettage of the endocervix may be helpful before proceeding to curet the endometrial cavity. The use of polyp forceps to explore the endometrial cavity is generally advisable. No dilatation and curettage is complete without an adequate biopsy of the cervix.

Cytologic studies of material from the vagina, cervix or endocervix are helpful only as screening

tests. A positive smear cannot be accepted as proof of malignancy without a tissue diagnosis. Furthermore, since only about 60 per cent of endometrial carcinomas give positive vaginal or cervical smears, the value of these smears is limited. In our own experience, positive smears have been obtained in about half of the cases of endometrial carcinoma in which they were performed. Cytological examination of material obtained by aspiration of the endometrial cavity is rarely of value. Endometrial biopsy, using a suction curet may occasionally be helpful. A positive diagnosis may be obtained from such biopsies where the disease is far advanced. However, an endometrial biopsy has some disadvantages. It is often an uncomfortable procedure for the patient. It is not always practical in the older woman with a small cervical canal. Further, if the results of such endometrial biopsy are negative, it is still necessary to perform a curettage with the consequent loss of time in making a diagnosis.

ENDOMETRIAL CARCINOMA

It is important to exclude the presence of endometrial carcinoma in the patient who is to have a hysterectomy for other reasons. Thus, for example, if hysterectomy is planned for myomata, carcinoma of the endometrium and, of course, carcinoma of the cervix must be excluded before the definitive operation is performed. All patients on our service who are to have a hysterectomy have preliminary cytological studies. Furthermore, if there is the least suspicion of menstrual irregularities, a preliminary D and C is performed to exclude endometrial carcinoma. This is generally performed as a separate procedure since the gross diagnosis of endometrial carcinoma by examination of curettings is by no means always accurate. Also, frozen section diagnosis is often extremely difficult.

TREATMENT

Once a diagnosis has been made, a decision has to be taken as to the best method of therapy for the individual patient. This involves proper consideration of possible spread of the disease as well as of the patient's general condition. Accordingly, certain basic studies are carried out on every patient before treatment is begun. These studies serve to exclude distant metastases and provide a baseline for post-treatment follow-up. This evaluation consists of:

1. Complete history and physical examination.
2. Routine blood count, serology, and urinalysis.
3. Blood chemical studies—NPN, fasting blood sugar.
4. Electrocardiogram.
5. X-ray of chest and other organs as indicated.
6. Study of the urinary tract by IVP and cystoscopy.
7. Study of the intestinal tract by proctoscopy and, if indicated, by barium enema.
8. Blood coagulation studies, if major operative procedures are contemplated.

MANAGEMENT METHODS

Adenocarcinoma of the uterine fundus can be treated by surgery, by radiation or by a combination of both methods. Therefore, after studies have been completed, patients with endometrial carcinoma at the University of Mississippi Teaching Hospital are reviewed at combined rounds by both the gynecological and the radiological staff. As a result of this conference a plan of treatment is outlined.

If the patient is in reasonably good general condition and has disease localized to the pelvis which appears upon examination to be curable, two possible methods of management are available. These consist of:

1. Preliminary insertion of radium into the uterine cavity, followed by hysterectomy.
2. Primary surgical treatment.

Until recently the first method has been the one most widely used in this country. Excellent results have been reported in many series with five year survival rates, usually in selected cases, ranging up to 90 per cent. First, capsules containing radium are inserted into the uterine cavity under anesthesia. The most commonly used technique is that of Heyman in which individual capsules, each containing 10 mg of radium, are applied with a special inserter. The number of capsules which can be inserted depends upon the size of the endometrial cavity and the size of the capsules. Calculation of dosage is largely empirical. Ideally we attempt to insert 120 mg and leave it in place for 72 hours. Six to eight weeks later a total hysterectomy with bilateral salpingo-oophorectomy and excision of the upper 1 to 2 cm of the vagina is performed.

In recent years increasing numbers of reports on the effectiveness of primary surgical therapy have appeared in the literature. Preliminary intrauterine application of radium, while important in controlling infection or the surface growth of tumor, cannot affect tumor cells deep in the myometrium or the parametrium. Furthermore, active residual tumor is found in the endometrial cavity in as high as 50 per cent of cases six weeks after the insertion of radium. For these and other

reasons, it is our practice at the University Hospital to use primary surgical treatment where feasible. However, it should be recognized that a simple total hysterectomy and bilateral salpingo-oophorectomy, such as is performed for myomata, is inadequate treatment for endometrial carcinoma. More radical excision is necessary.

Our own technique follows closely that performed for early carcinoma of the cervix. Bilateral salpingo-oophorectomy and total hysterectomy are performed. In addition, an attempt is made to obtain a wide piece of parametrium and paracervical tissue. The upper 3 to 4 cm of vagina are excised, but wide paravaginal dissection, as is done for carcinoma of the cervix, is usually not performed. In our early cases we did not do a pelvic node dissection, but, since recent evidence suggests that metastasis to the pelvic nodes is more common than was previously thought, we have included this where feasible in our more recent cases. Postoperative radiation is usually not given unless removal appears to have been incomplete.

POINTS ON TECHNIQUE

A few additional points about the technique are worth mentioning. Before the abdominal incision is made, the patient is placed in the lithotomy position and the cervix closed with a figure of eight catgut suture. This is done to prevent, at least theoretically, the escape of malignant endometrial cells into the vagina. At laparotomy careful examination of the whole abdomen is performed and particular attention paid to the pelvic and para-aortic lymph nodes. The finding of a positive para-aortic lymph node precludes radical surgery. As a preliminary to the dissection, the uterine ends of the tubes are closed with curved Kocher hemostats to prevent the spillage of cancer cells into the peritoneal cavity. Wide dissection of the parametrial tissues involves ligating the uterine artery as it leaves the hypogastric artery and, in addition, dissecting out the lower portion of the ureters and exposing both ureterovesical junctions.

When the patient has localized disease in the pelvis, but is in fair or poor general condition, our preferred method of treatment is to insert radium into the uterus and, if the patient's condition permits, six to eight weeks later to perform a total hysterectomy and bilateral salpingo-oophorectomy. When it does not appear that the patient can withstand this procedure, additional external radiation therapy by means of the cobalt unit is usually given.

When the disease appears to be far advanced and non-resectable, as, for example, when the parametrial involvement extends to the pelvic wall, insertion of radium followed by external radiation may have value in palliation, particularly in the control of bleeding.

SUMMARY

1. Adenocarcinoma of the endometrium is an important cause of irregular bleeding during and after the menopause.

2. Adequate investigation of irregular vaginal bleeding in women over 40 years of age includes a careful history, thorough pelvic examination and a diagnostic dilatation and curettage. Awareness of these necessary measures on the part of patient and physician will decrease delay in the management of this disease.

3. Once a diagnosis of endometrial adenocarcinoma has been made, definitive studies need to be performed to exclude metastases and serve as a baseline for post-treatment follow-up.

4. Decision as to appropriate treatment for the individual patient involves close coperation between gynecologist and radiologist.

5. In patients who have resectable disease limited to the pelvis and who are in good general condition, treatment may be by preliminary insertion of radium into the uterine cavity followed by total hysterectomy and bilateral salpingo-oophorectomy or by primary radical operation. At the University of Mississippi Teaching Hospital our preference in these cases is for the latter method of management.

6. In patients who are fair or poor operative risks, the intra-uterine application of radium followed, if possible, by total hysterectomy and bilateral salpingo-oophorectomy or by external radiation appears to give a reasonable chance of survival. ★★★

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Acute Otitis Media In Infants and Children

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Despite the great progress which has been made in the control of infectious diseases, acute otitis media is still a common disease among infants and children. The most common causes are pneumococci and Hemophilus influenzae in children under five and pneumococci and Beta hemolytic streptococci in older children.

Histopathologically, acute otitis media is manifested essentially as acute inflammation of the mucosal lining of the Eustachian tube, middle ear, mastoid antrum, and mastoid air cells. The symptoms are often different in infants and older children, but the characteristic changes in the tympanic membrane are the same in all age groups.

In recent years, the management of acute otitis media has become a controversial subject with arguments centering around the relative merits of antibacterial agents and tympanotomy. Dr. Rutledge says that while antibiotic therapy alone will control many of these infections, it will also result in a significant number of failures and complications. He concludes, "Treatment of this infection is adequate only if surgical paracentesis is performed."

TREMENDOUS ADVANCES HAVE BEEN MADE during the past several decades in the prevention and management of infectious diseases. These achievements have been possible with continuing development of effective vaccines and antibacterial agents. Despite this remarkable progress, however, certain acute infections still present controversial problems in management and, not infrequently, result in significant or serious complications. Such features characterize acute suppurative otitis media —as it occurs in young patients.

Infants and children are more susceptible to acute infections of the middle ear than are adults because of a number of peculiarly predisposing factors:

1. Relatively short, straight, and patulous Eustachian tubes, which open at the level of the hard palate.
2. Abundant adenoid tissue, which continues to grow until the patient reaches mid-childhood and which responds with an exaggerated reaction of hypertrophy and hyperplasia to local infection or allergy.[1]
3. Frequent upper respiratory infections and allergies.

Recently, several investigators have examined the bacterial flora of untreated acute otitis media. Bjuggren and Tunnevall[2] removed purulent exudate from the middle ears of 131 children under the age of seven years by performing paracenteses of the ear drum with a sterile needle attached to an aspirator. The distribution of bacteria isolated on culture of this material appears in Table I. These investigators found that 38 per cent of the cases of relapsing otitis media in children under the age of five years were due to *Hemophilus influenzae*.

Using essentially similar techniques, Mortimer and Watterson[3] examined purulent exudate from the middle ears of 68 children under the age of two years. Their results of culture of this material are shown in Table II. The fact that the exudate was sterile on culture in 38 per cent of the patients in their series is perplexing, especially since

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bacteria were found in almost one-half of the group on direct smear of the exudate. Perhaps some of the patients had myringitis bullosa of viral origin.

On the basis of such data, the authors concluded that pneumococci and *Hemophilus influenzae* are the most common offenders up to the age of five years. After this age *Hemophilus influenzae* rarely causes acute otitis media and Beta hemolytic streptococci equal pneumococci in frequency. Other studies have yielded similar results.[4]

TABLE I

BACTERIA ISOLATED FROM MIDDLE EARS OF 131 CHILDREN

(BJUGGREN AND TUNNEVALL)

Bacteria	*Per Cent*
Pneumococci	50
Beta hemolytic streptococci	21
Hemophilus influenzae (most not typable)	17
Pyogenic staphylococci	4
Other organisms	6
No growth	2

Histopathologically, acute otitis media is manifested essentially as acute inflammation of the mucosal lining of the Eustachian tube, middle ear, mastoid antrum, and mastoid air cells since these structures are contiguous. At first, the epithelial cells of the mucosal lining become extremely edematous. Later, they become necrotic and may even ulcerate. Purulent exudate bathes the entire cavity (Fig. 1). Occasionally, in particularly virulent infections, necrosis and slough of part or all of the tympanic membrane and ossicular chain may occur.

TABLE II

BACTERIA ISOLATED FROM MIDDLE EARS OF 68 CHILDREN

(MORTIMER AND WATTERSON)

Bacteria	*Per Cent*
Pneumococci	40
No growth	38
Hemophilus influenzae (most not typable)	12
Pneumococci and *Hemophilus influenzae*	6
Beta hemolytic streptococci	3
Unidentified	1

Most of these infections begin as nasopharyngitis and ascend in or along the Eustachian tube. Sinusitis and nasal allergy appear often to be important precipitating factors.

Clinical manifestations differ considerably in infants and older children. Whereas both usually have fever and symptoms of nasopharyngitis, infants have difficulty identifying localization of the pain and tend to have remote constitutional symptoms, such as nausea, vomiting, diarrhea, or convulsions. The older child readily describes his pain as localized in the infected ear and complains of diminished hearing. Sometimes tinnitus is also an annoying complaint.

In all age groups, results of physical examination are substantially the same—with evidences of nasopharyngitis and distinct changes in the tympanic membrane. During the early stages of the process, the ear drum is inflamed and retracted as a result of blockage of the Eustachian tube (Fig. 2). Next, as pathogenic bacteria begin to proliferate in the middle ear, exudate forms causing outward bulging of the ear drum, first of the flaccid portion and finally of the entire membrane. Normal landmarks, such as the cone of light, contour of the mallus, and plica, are lost; and the color of the tympanic membrane becomes intensely red or reddish-yellow (Fig. 3).

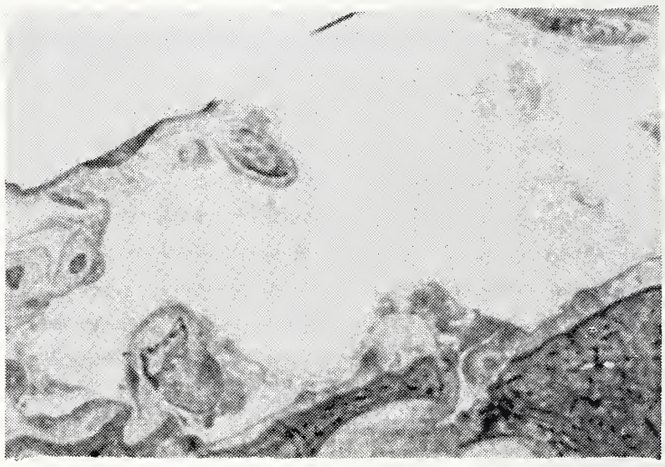

Figure 1. Histologic section of acute otitis media. Purulent exudate is present, and the mucosal lining of the middle ear is extremely edematous. (Photomicrograph courtesy of Dr. J. R. Lindsay.)

Ordinarily, differential diagnosis is not difficult if the ear drums are carefully inspected after thorough cleansing of the external auditory canal, a procedure which is often neglected or improperly done. The removal of cerumen or debris from the auditory canal is best accomplished in the following manner: As in any other manipulative procedure, small or uncooperative patients are properly restrained—an assistant firmly secures

the patient, especially his head. Older, cooperative patients are allowed to sit upright on an examining chair. Large quantities of occluding material are removed with a suction device and attached suction tip under direct vision, through an otoscope. Remaining cerumen is then removed under direct vision, with repeated gentle wipes of dry cotton on a metal ear applicator (Fig. 4). Removal of cerumen with the ear curette should be avoided because too often trauma is associated with the use of this instrument.

MANAGEMENT

In recent years, the management of acute otitis media has become the subject of considerable controversy. Arguments center around the relative merits of antibacterial agents and tympanotomy. Unfortunately, many physicians consider surgical paracentesis no longer necessary and contend that antibiotic therapy alone will control the disease. This plan, admittedly, will control many of these infections, but it will just as surely result in a significant number of failures and complications. The old surgical dictum that pus under pressure should be relieved by incision and drainage still strongly applies to acute otitis media. Tympanotomy is indicated in any patient who has a bulging ear drum. The only clinical indication necessary for performing this operation is the suspicion of exudate in the middle ear. This measure alone will effect prompt cessation of pain and lysis of fever in the patient with acute suppurative otitis media. Furthermore, the etiologic agent may be isolated by culturing exudate removed at operation. After bacterial sensitivity studies, the appropriate antibiotic to combat the infection may be determined.

This surgical procedure can be accomplished under local anesthesia without discomfort to the patient. The best local anesthetic agent available is Bonain's solution, which consists of equal parts of crystals of menthol, phenol, and cocaine. It can be applied easily and safely by placing the tip of a slender cotton wick, previously moistened with the solution, in direct contact with the posterior, inferior quadrant of the ear drum. This wick is left in place for from twenty to thirty minutes and is then removed, leaving a frosted zone of anesthesia on the drumhead. A curvilinear incision is made through this zone. Caution is needed in the use of Bonain's solution; it is caustic and should not be used in large quantities in the ear canal. Furthermore, the use of water in conjunction with this solution should be avoided, as this combination may result in necrosis of the ear drum.

POSTOPERATIVE CARE

After the tympanotomy has been performed, a sterile, cotton-tipped, wire applicator is used to remove enough exudate to inoculate appropriate culture media, such as rabbit blood agar. Then, the remaining fluid content of the middle ear is removed with a suction device, under direct vision. As recommended by McLaurin,[5] the parent should be carefully instructed in the manner of inserting a sterile, dry, cotton wick into the ear

Figure 2. (left) Tympanic membrane in early acute otitis media. The ear drum is inflamed and retracted.
Figure 3. (right) Tympanic membrane in late acute otitis media. Because of filling of the middle ear with purulent exudate, the ear drum is reddish-yellow and bulges outward. Normal landmarks are absent.

canal. This wick must be changed at least four times or more each day in order to absorb drainage and keep the auditory canal and external ear relatively dry, thus preventing any local infectious eczematoid reaction or auricular pyoderma.

ADDITIONAL THERAPY

Additional therapy consists in administration of a systemic vasoconstrictor, for example, pseudoephedrine hydrochloride, to produce maximum shrinkage of the inflamed mucous membranes of the nose and Eustachian tube, and a broad spectrum antibiotic, such as tetracycline, which is well tolerated and will cover most etiologic possibilities adequately.

Two days postoperatively, the patient's condition is reappraised. Antibiotic therapy is adjusted according to the results of bacterial sensitivity studies, and the antibiotic of choice is continued for seven to ten days or longer, depending upon the clinical response. The external auditory canal is thoroughly cleansed, and the tympanic membrane carefully inspected. A change in the character of the discharge from serosanguineous to purulent or mucoid, with a decrease in fulness and inflammation of the drumhead, signifies satisfactory improvement. If, however, the paracentesis incision has closed and evidences reappear of fluid in the middle ear cavity, a second tympanotomy, followed by evacuation of the fluid content, should be performed without hesitation. When properly performed, this surgical procedure may be repeated without fear of subsequent damage to the ear drum or to hearing.

Although the overall incidence of overt complications of acute otitis media, such as mastoiditis, labyrinthitis, lateral sinus thrombosis, meningitis and brain abscess, have decreased in recent years, largely as a result of the use of antibacterial drugs, other, more insidious, problems secondary to antibiotic-treated otitis media have become more frequent.[5] These include masking of middle ear and mastoid infections, serous otitis media, and conductive deafness.

OCCURRENCE IN INFANTS

Nowadays, infants are sometimes seen who have been ill intermittently for several months with episodes of fever and irritability and who have received antibiotics each time for several days. Upon examination, such a child will often be found to have dulness and distension of one or both ear drums. Response to surgical drainage seems almost miraculous to parent and physician alike.

Even more common is the older child who begins to complain of "stopped-up ears" and decreased hearing, without fever, after having received antibiotics briefly for one or more acute infections of the middle ear. An amber or bluish discoloration of the drumhead without obvious fulness but with loss in conductive hearing is characteristic. Tympanotomy, followed by suction, will yield a large mass of thick, heavy mucus in the hypotympanum. The clinical picture described is that of serous otitis media, and the indiscriminate use of antibiotics is one of the most common causes of this disorder in children.[6]

It has been estimated from national hearing surveys that about 5 per cent of the children in this country are hard of hearing.[7] A recent survey of 2,628 children with significant deafness revealed a ratio of conductive to perceptive hearing losses of 2:1. Complications of otitis media were considered responsible for the defect in 68.4 per cent of the conductive group.[8]

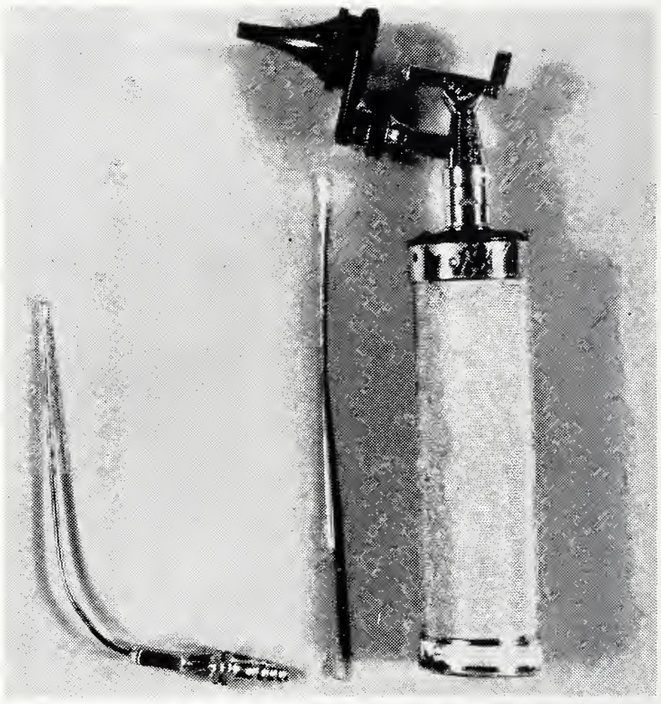

Figure 4. Correct equipment for cleansing external auditory canal: brain suction tip, metal ear applicator with cotton, electric otoscope.

Obviously, most complications described can be prevented by adequate therapy of an initial attack of acute otitis media. If the disease recurs despite good management, precipitating factors, such as sinusitis, nasal allergy, and occlusion of the Eustachian tube due to adenoidal hypertrophy, should be sought and vigorously eliminated or treated.

SUMMARY

Acute otitis media is still a common disease among infants and children. The most frequent causes in patients up to five years of age are pneumococci and *Hemophilus influenzae*. Later, Beta hemolytic streptococci and pneumococci predominate. Although the symptoms are often different in infants as compared with older children, the characteristic changes in the tympanic membrane are quite identical. Treatment of this infection is adequate only if surgical paracentesis is performed. In most cases this measure will prevent development of complications which are now common, such as masking of middle ear and mastoid infections, serous otitis media, and conductive deafness. ★★★

Charity Hospital

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Rural Areas Are Healthier for Children

If it's been your impression that farm children are healthier than city-bred youngsters, you're right!

The Health Insurance Institute reports that city children suffer from acute health conditions about half again as often as youngsters raised on farms, and that rural children who do not live on farms fall somewhere in between the two.

The Institute report was based on a U. S. National Health Survey of persons under 25 years of age. The acute health conditions included everything from chicken pox and sore throats to appendicitis and broken legs.

Because two-thirds of all episodes of acute conditions were such respiratory ailments as sore throats, colds, influenza and tonsillitis, the Institute suggested that the difference in the health records of city and farm children might be due in part to farm youngsters not living so close together as city children and therefore being less exposed to communicable diseases.

The survey showed that for youngsters under age 25, city children had 3.7 acute conditions per person a year, compared to 3.4 for rural non-farm children and 2.6 per person for farm youngsters.

During the year under study in the survey, persons under 25 years of age in the U. S. experienced 252 million cases of acute conditions involving either restricted activity or medical care.

Children under the age of five averaged four such acute conditions per child during the year, a rate twice as large as the rate for adults. Children at ages five to 14 experienced 3.5 cases a year and young persons at ages 15 to 24 averaged 2.7 cases per person a year, said the Institute report.

Children under the age of 15, regardless of sex, were hospitalized at about the same rate—about 15 hospitalizations per 1,000 persons a year for an average length of hospital stay of 5.5 days.

The financial impact of many of these more serious illnesses were softened by health insurance, said the Institute, which estimated that some 46 million children in the U. S. are now protected against the costs of ill health by health insurance.

Factors of Growth in Postoperative Care

J. L. WOFFORD, M.D.
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Growth and development patterns of three different tissue groups are reviewed to illustrate their influence on postoperative care. The author discusses development of the ear ossicles, lung, and adrenal gland from newborn to adult. He considers how these growth patterns might affect postoperative care.

THE SIGNIFICANCE OF BODY GROWTH and development is very important in clinical medicine. The term "growth and development" has come to mean the result of all the complex chemical, physical, and psychological processes responsible for the closely interrelated changes in the form and function of all body tissues. It implies as well, an increasing capacity for purposeful adaptation acquired by a child in progressing toward maturity.

GROWTH

In a strict sense, growth is a change in body sizes and proportions resulting from cellular multiplication and increase of intracellular substance. Normal body sizes and proportions at varying ages have been measured by numerous groups of investigators. The normal growth curves of the body based upon such work have proved useful in evaluating a child's progress.

The landmarks of development, on the other hand, are not as easy to chart because the relationship of function to structure is more subtle. Usually growth and development progress together, but at times they are widely separated for reasons still unknown. Furthermore, each organ-system of the body has its particular characteristic pattern of growth and development and these patterns differ widely from one organ-system to the other.

Our purpose is to discuss the pattern of growth and development of three different groups of tissues in the body to see how their characteristic pattern might affect postoperative care in the young patient.

For an example of what is meant by a pattern of growth and development, let us examine briefly the ear ossicles. The size of the ear ossicles removed from a newborn are nearly the same size as those of an adult. There is very little difference in the volume of the two sets of bones. You will recall that they are paired bones within the cavity of the middle ear. The names given them are the malleus, the incus, and the stapes.

After birth the pattern of growth and development of these ear ossicles would appear to be an increase in density of the bones. There is minor shifting in the position of the ossicles, to be sure, as the tympanic membrane increases in size and assumes the near saggital plane of the adult. For this group of tissues the characteristic pattern is one of increasing density without a marked change in size or shape.

It is unlikely that this particular knowledge would enhance our postoperative care in the young patient, but it does form a basic line for comparison with the other groups of tissues we wish to examine.

LUNG

In order for us to see the changes in the lung that occur after birth, we shall consider the heart and lungs as a functional unit. Without presenting the details of the embryology involved, we can summarize briefly what appears to be the modern view of cardiopulmonary physiology before birth.

Read before the Section on Pediatrics, 90th Annual Session, Mississippi State Medical Association, Jackson, May 13-15, 1958.

1. Primary atelectasis prevails in the lung.
2. The potential air spaces may contain some amniotic fluid.
3. The fetus probably makes feeble respiratory movements in utero.
4. The ductus arteriosus and foramen ovale are patent.
5. The caval blood flow bypasses the pulmonary circuit for the most part and enters the aorta after leaving the fetal heart.
6. Blood flow through the pulmonary artery is very slight.

CHANGES IN NEWBORN

At the time of birth in a healthy newborn, radical functional changes occur in the cardiopulmonary physiology. These changes are pertinent to our discussion for being born is but a step in growth and development which has preceded this time of life. For brevity we shall outline these changes occurring in the heart-lung unit at the time of birth.

1. Blood flow is reversed through the ductus arteriosus. This in turn increases the blood flow in the pulmonary circuit.
2. The foramen ovale closes from a functional standpoint.
3. The pulmonary capillary resistance which was initially high because of primary atelectasis decreases with the initiation of respiration.
4. The aeration of the lungs takes place almost instantaneously.
5. Atmospheric pressure prevails in the pleural space.

With this preliminary background in mind, we shall consider a few facets of pulmonary growth and development after birth.

At first, the respiratory movements in a newborn are like the movements of a reciprocating piston. The volume of air inhaled when the diaphragm reaches the end of its downward stroke is the vital capacity of the lung. This volume of inspired air is also tidal volume in the newborn.

During the first 24 to 48 hr. of life, the lungs become expanded. This means that the alveolar sacs are opened and gaseous exchange readily takes place. Recent studies[2, 4, 6] show that oxygen saturation of arterial blood is 95 per cent or better within a few minutes after birth, and that acid-base balance is achieved in about 5 hr. after birth. During this critical time each breath that the infant takes is essential to his continued well-being.

The volume of air of each inspiration which is approximately 20 cc. is needed to fill the lung and the physiologic dead space. The oxygen contained within this volume of inspired air rapidly diffuses across the alveolar membrane at a rate of 15 cc/min/mm Hg. of differential pressure. This is the same oxygen diffusion rate as measured in a normal adult. The infant, therefore, by necessity must replenish the small quantity of inspired air at a rapid rate. Oxygen consumption in the tissues of the newborn is nearly twice that of an adult.[5] As total lung volume increases due to growth the tidal volume (or the volume of air of each inspiration) becomes an increasingly smaller fraction of vital capacity. The following table will summarize these facts.

RESPIRATION

Adult		*Infant*
12-18/min.	Rate	± 40/min.
± 500 cc.	Tid. vol.	± 20 cc.
5-8 lit.	Min. vol.	± 500 cc.
15 cc/min/-mm Hg.	O_2 D. R.	15 cc/min/-mm Hg.

Expansion of the lung is not merely a process of distension by respiratory movements. When the respiratory apparatus begins to function, the alveolar spaces are deflated and crumpled like a sack. The pulmonary capillary bed forming a network in the septal walls of the alveoli are extensively folded and tortuous. As a consequence blood flow through the capillaries of the lung is slight.

CAPILLARY ERECTION

As soon as the blood flow is reversed in the ductus arteriosus, pressure in the pulmonary artery is increased and the capillary network in the septal walls become straightened. This in turn causes dilatation of the crumpled alveoli. The sustained arterial pressure in the pulmonary artery keeps the pulmonary capillaries tense and straight. This process by which the lung is expanded has been termed "capillary erection of the lung" by Jáykká.[3] Capillary erection opens the air sacs of the lung so that air may enter these spaces. The distended capillary network also is the supporting structure which prevents the alveoli from collapsing during expiration.

When the fetus makes respiratory movements in utero, amniotic fluid will move back and forth in the larger air passage ways and the fluid that is inspired will be expired. Very little amniotic fluid enters the crumpled alveolar sacs which are present just before birth. If the fetus has already been delivered and the capillaries are erected, air will

be drawn into the expended alveolar spaces and expansion of the lung with air will result.

AERATION OF LUNGS

This means that the aeration of the lungs in the newborn takes place primarily by a process of erection which involves the structure of the alveolar walls and is actuated by the changes in circulation at birth. This process cannot take place in the newborn if the necessary hemodynamic conditions do not exist or if the erectile apparatus is defective or lacking.

Furthermore, since the elastic tissue in the lung would tend to collapse the lung, capillary erection in the alveolar walls is probably the most important factor in maintaining aeration of the lungs in the newborn. Since there is no negative pressure in the pleural space at birth, the intrinsic elastic fibers of the lung are counteracted by capillary erection. The cardiopulmonary blood circulation of the newborn thus provides an effective protective mechanism. The pulmonary capillaries not only help open the crumpled alveoli which prevail at birth but also keep them open during expiration.

We have seen how the lung of the infant has developed a functional capacity after birth. Let us now consider the pattern of growth of the lung parenchyma so that it may reach adult size. The act of birth does not interrupt the continuous process of lung growth that has preceded the birth. One might think that the increase in size after birth is due to continuous dilatation of existing alveolar spaces. If this were true the dilated alveoli would compress the pulmonary capillaries and possibly produce pulmonary hypertension with many pathologic connotations. Furthermore, diffuse emphysema with overdistended alveoli is not common in children.

GROWTH AFTER RESPIRATION

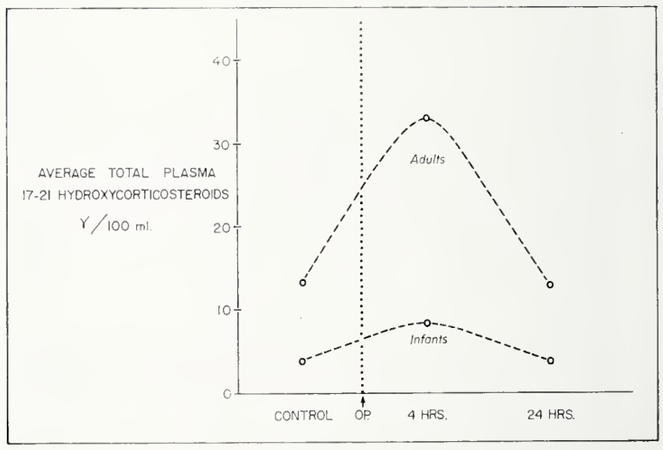
Bremer[1] has shown that the manner of growth after respiration has begun differs from lung growth in utero. After birth, new tubular sprouts develop from the terminal air sacs and burrow into the intervening tissue. These sprouts in turn expand into new alveoli which in turn send forth other generations of growing alveolar sprouts. The air sacs are located at the terminal end of the bronchial tree. The small terminal bronchiole ends by dividing into three or more of these air sacs. It is from these air sacs that new sprouts develop and create succeeding generations of alveoli.

As this process continues, the alveoli sacs which were nearest to the hilum are converted into terminal bronchioles and the spiral bronchial musculature surrounding the more proximal bronchi gradually engulf these sacs which have been converted into bronchioles. This continuous growth process of adding alveolar sacs continues until approximately the age of puberty. This accounts for the fact that in a young patient removal of lung tissue can be done without the same gravity as a comparable resection in adults. The space left after excising pulmonary tissue in the young patient is filled by newly developed alveoli from that portion of the lung which has not been removed.

ADRENAL GLAND

The pattern of growth and development of the adrenal gland is strikingly different from the two previous tissue groups already considered. In order to clarify the unique pattern of change in the infant adrenal gland, it is well to review the histology of the adult adrenal gland. The mature

Effect of Surgery on Adrenocortical Function
Adults vs. Infants



gland is composed of two distinct types of tissues called the cortex and the medulla. The adult cortex, from which the adrenocortical hormones are elaborated, is composed of three cell layers. The thin outer layer is the glomerular zone. The subadjacent thick layer composed of bundles of cells is the fascicular zone. The innermost portion of the cortex is the reticular zone and it surrounds the centrally located medulla.

The adrenal gland develops early in the fetus. By the 13 mm. stage the adrenals are already prominent and occupy a position dorsal and medial to the kidney. Throughout gestation the adrenal glands continue to grow at a rapid rate, so that by the time of delivery the infant adrenal gland is proportionately 20 times larger than the adult gland.

The newborn adrenal gland is not only larger proportionately but is histologically different from the adult gland. The cortex is quite thin and is composed of cells belonging to only the glomerular zone. The fascicular zone not present at birth appears during the second postnatal week. The reticular zone also not present at birth can be identified in the third postnatal month. The medulla which is distinct and in a central position at birth is separated from the thin cortex by a thick layer of cells, known as the fetal zone of the adrenal cortex. The fetal zone is a broad band of large polyhydral cells which have a granular cytoplasm and a prominent nucleus. Swinyard[7] in volumetric determinations of adrenal glands at all ages found that the fetal zone at the time of birth comprises 85 per cent of the total adrenal cortex.

INVOLUTION OF FETAL ZONE

The unique and dramatic change that occurs in the adrenal after birth is the involution of the fetal zone. The involution is so rapid that within two weeks after birth the adrenal gland has lost 50 per cent of its mass. Microscopically the necrosis of the fetal zone takes the form of congestion, hemorrhage, disruption of the cells, collapse of the stroma, and final resorption of the entire zone by phagocytosis. Once the involution of this zone is complete it does not reappear in later life.

While this involution occurs, the adult cortex continues to develop and increase in size. By the age of 17 years the change is completed and the adrenal cortex shows the histologic picture of maturity. In this instance the pattern of growth and development is unique, for there is marked cellular destruction occurring side by side with marked cellular multiplication in the same organ at the same time.

DISCUSSION

If these factors of growth and development are fully appreciated, they will serve to sharpen our approach toward postoperative care in the young patient. There is no doubt that in most instances competent management during the period after operation will end in a successful outcome. On the other hand, delays from indecision and inadequate attention to many details can waste the small physiologic reserves of the child and very quickly swing the balance unfavorably.

The pulmonary complications following any type of surgery that requires general anesthesia are probably the most frequently encountered of all serious postoperative complications. Onset of pulmonary difficulties may be so insidious that they are overlooked until cyanosis and soft tissue retraction force us to be more observant.

Hypotensive episodes caused by a variety of factors may reduce capillary pressure in the pulmonary system to such an extent that atelectasis may take place because of weakened capillary erection. Blood pressure readings are, therefore, important and should be recorded during and after operations on children.

Hypertension or increased blood volume from excess intravenous fluids or blood will greatly enhance the development of pulmonary edema. Edema of the septal walls or free fluid in the air sacs diminishes oxygen diffusion across the young alveolar membrane and results in increasing hypoxia.

Accumulated secretions in the tracheobronchial tree which can be removed easily at the beginning or foreign bodies such as a displaced airway in an unattended child may cause enough mechanical obstruction to seriously hamper respiratory exchange.

Acute gastric dilatation interferes to a significant degree with diaphragmatic movements by exerting upward pressure upon the diaphragm. Since the diaphragm is the main muscle of respiration, especially in children, this pressure can very quickly reduce tidal volume. Early decompression of a dilated stomach and bowel restores the respiratory exchange toward normal.

RESPIRATORY FUNCTION

In a word, the respiratory function in the young patient is finely balanced. The lung increases in size and capacity as the demands for pulmonary activity becomes greater. Mechanical factors that interfere with respiratory function during the postoperative period can seriously upset the balance at an alarming rate.

Adrenocortical function has not often been studied in infants at the time of surgery. One wonders if the dramatic involution of the fetal cortex might not reduce adrenal function or at least interfere with its response to surgery. If this be the case the trauma of surgery could possibly produce adrenal insufficiency in the postoperative period. It would seem, therefore, important to demonstrate that the infant adrenal gland is capable of responding to the stress of anesthesia and surgery.

We have measured free 17-21 hydroxycorticosteroids (principally hydrocortisone) in the plasma of 11 infants who underwent major surgical procedures including thorocotomy. These children were unselected except by virtue of age.

They ranged in age from 1 mo. to 17 mos. Nine were less than 4 mos. of age.

Three samples of venous blood were drawn from each patient. The control sample was taken immediately before operation prior to the onset of anesthesia; further samples were obtained at 4 hr. and 24 hr. following operation. Free hydrocortisone in the control specimen averaged 2.73 μg/100 ml of plasma. The 4 hr. specimens showed a peak of 5.35 μg/100 ml plasma while the 24 hr. specimen contained levels which approximated the controls.

These measurements agree with measurements made by others and demonstrate increased adrenocortical activity as a response to surgery. The pattern of the response was similar to adults. Although the magnitude is less, the qualitative and temporal response of adrenocortical activity is similar to adults.

Adrenocortical replacement therapy, therefore, does not appear to be indicated as a routine measure following surgery upon infants.

The pattern of growth and development of three groups of tissues have been presented. Each pattern is different and complex.

It is worthy of emphasis that these factors of growth are important not only in our over-all assessment of a child's progress but are especially important in considering a satisfactory approach to postoperative care in the young patient. ★★★

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Should the Cancer Patient Be Told?

Should a physician tell a patient that he has incurable cancer? "It depends," say physicians interviewed by *New Medical Materia.*

Out of 5,000 doctors interviewed by the magazine in a nationwide survey, 22 per cent answered "never," 16.1 per cent "always," and 61.9 per cent said "it depends" on whether the patient is stable, insists on knowing, needs time to put affairs in order, the family insists the patient be told, there is no one else to tell.

Responses reported in the March *New Medical Materia* covered four cases: 1. When cancer is first suspected but not confirmed. 2. When an incurable cancer is established beyond a reasonable doubt. 3. Whether to tell the victim's family—even when the patient is kept in the dark. 4. Whether to give the victim an estimate of the time remaining to him.

Seventeen and eight-tenths per cent of physicians interviewed reported they tell the patient nothing when cancer is first suspected; 17.7 per cent always tell the patient. Sixty-four and five-tenths per cent tell the patient under these circumstances: to insure the patient's cooperation, when the patient is stable, when the patient specifically asks, when the doctor is sure of the diagnosis or when the patient has heavy responsibilities.

In answer to the question, "Should you tell the incurable cancer patient how much longer he may expect to live?," 53.2 per cent said "never," 8.2 per cent said "always," and 38.6 per cent said "sometimes."

Almost all physicians surveyed (94.5 per cent) reported that they tell the family how much longer the patient may live.

Evaluation of Rauwolfia Serpentina With Flumethiazide in Hypertension

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Twenty-two female patients ranging in age from 76 to 91 years of age comprised the study group for this evaluation of Rauwolfia serpentina with flumethiazide in cases of hypertension. The tables show that a decline in blood pressure occurred in all of the patients. Eighteen of the responses were "good," two "fair," and two "poor." Dr. Lotterhos concludes: "This study . . . has demonstrated flumethiazide-Rauwolfia serpentina whole root to be a most satisfactory antihypertensive preparation."

CLINICAL INVESTIGATION HAS revealed the value of the newer and more potent oral diuretic agents, the benzothiadiazines, in the management of hypertension.[1, 2] One of these substances, flumethiazide, has been shown to have about the same natriuretic and chloruretic activity but less effect on the urinary excretion of potassium and bicarbonate ions[3, 4, 5] than the original member of the chemical series, chlorothiazide. Present experience indicates that flumethiazide can be administered for prolonged periods and should yield satisfactory therapeutic results.[5]

PRESENT STUDY

In the present study, flumethiazide has been given to elderly female hypertensive patients in combination with the whole root of Rauwolfia serpentina. The whole root of Rauwolfia serpentina is generally accepted as exerting antihypertensive effects both when administered as the sole antihypertensive agent and when given in combination with other medication. The combination of Rauwolfia and flumethiazide could be expected to produce an enhanced effect[6, 7, 8] when used in the treatment of hypertension, the blood pressure often being lowered in patients who do not respond satisfactorily to either agent administered alone. Some patients respond who do not respond to similar combinations which include chlorothiazide.[9, 10] Potassium chloride is included in this formula to counteract possible loss of potassium as a consequence of the administration of the diuretic.

In the present report, the clinical results obtained from the trial of this combination in a group of aged female patients with moderately severe hypertension are offered. As will be seen, good reductions in blood pressure were observed in almost all members of this group of patients, with no side effects.

The Patients. Twenty-two patients ranging from 76 to 91 years of age comprised this study group. All were females suffering from hypertension. These patients were in residence in the Old Ladies Home of Jackson, Mississippi.

Conventional diagnostic examination was employed and routine clinical laboratory procedures instituted prior to the initiation of therapy. Of the 22 patients included in this geriatric series, all had moderately severe hypertension. Three of the group had an associated arthritis, one of these presenting multiple pelvic fractures. Another patient exhibited an associated edema of the lower extremities.

Each patient had been treated for hypertension prior to the institution of therapy with Rautrax. Immediately preceding the inauguration of treatment, the blood pressure readings were taken with the patient seated, when possible, following a period of casual conversation, and recorded for the purpose of this study as control levels. A range

Rautrax (Rauwolfia serpentina with flumethiazide) is a trade mark of E. R. Squibb and Sons, New York.

of from 190 to 230 mm. Hg, systolic, and from 90 to 120 mm. Hg, diastolic, was seen, with the group average being 208/104 mm. Hg.

The Medication and Dosage. Rautrax tablets contained 400 mg. of flumethiazide, 400 mg. of potassium chloride, and 50 mg. of Rauwolfia serpentina whole root. One, two or three tablets were given daily, the dosage being adjusted according to the need and the response of each patient.

RESULTS

Table I summarizes the results of treatment with these agents in each patient of the group. Noteworthy is the fact that the mean blood pressure, defined here as ½ (systolic and diastolic pressure), declined in all the patients studied. Eighteen patients of the 22 observed showed a "good response" to therapy. Two patients showed a "fair response," and the remaining two a "poor response." The average mean arterial pressure

$$\frac{\text{Total systolic and total diastolic}}{2\ (\text{No. of patients})}$$

for this study series declined from 156 mm. Hg, the average of the pre-treatment readings, to 132 mm. Hg, following treatment. In Table II the separate declines in systolic and diastolic are tabulated for the 22 patients.

Evidence of side effects or manifestations of toxicity was lacking completely, few concomitant compaints, such as fatigue or weakness, being reported.

COMMENT

In this series, consisting exclusively of geriatric patients, Rautrax proved to be a most effective antihypertensive agent. A decline in blood pressure occurred in every one of the 22 patients in

TABLE I

RESULTS WITH RAUTRAX IN 22 HYPERTENSIVE PATIENTS

				Blood Pressure (mm Hg)					
Patient Number	*Age and Sex*	*Diagnosis*	*Period Treated (Weeks)*	INITIAL	MEAN	POST THERAPY	MEAN[1]	DECLINE IN MEAN PRESSURE (MM HG)	EVALUATION OF THERAPEUTIC RESULTS
1	83 F	Hypertension Arthritic and Edema	26	190/90	140	160/80	120	20	Very Good
2	82 F	Hypertension, Lower Extremities	16	200/100	150	170/90	130	20	Very Good
3	81 F	Hypertension-Labile	3	190/90	140	170/90	125	15	Good
4	77 F	Hypertension	26	210/110	160	170/90	130	30	Good
5	86 F	Hypertension	34	210/110	160	170/90	130	30	Good
6	85 F	Hypertension	26	210/110	160	170/90	130	30	Good
7	77 F	Hypertension	21	210/110	160	180/90	135	25	Good
8	79 F	Hypertension-Labile	4	210/100	155	170/90	130	25	Good
9	90 F	Hypertension	26	220/120	170	190/90	140	30	Good
10	84 F	Hypertension, Arthritic	16	210/100	155	150/80	115	40	Good
11	79 F	Hypertension	5	200/90	145	180/90	135	10	Good
12	76 F	Hypertension	20	230/120	175	160/90	125	50	Good
13	91 F	Hypertension	4	200/90	145	160/80	120	25	Good
14	77 F	Hypertension	12	200/98	149	180/90	135	14	Good
15	85 F	Hypertension	8	200/100	150	170/90	130	20	Good
16	77 F	Multiple Pelvic Fracture Hypertension, Arthritic	26	200/96	148	170/90	130	18	Good
17	84 F	Hypertension	26	220/100	165	170/90	130	35	Good
18	85 F	Hypertension	26	210/100	155	170/80	125	30	Good
19	79 F	Hypertension	26	230/120	175	190/100	145	30	Fair
20	79 F	Hypertension	8	230/120	175	190/100	145	30	Fair
21	85 F	Hypertension	3	190/110	150	180/100	140	10	Poor
22	86 F	Hypertension	16	204/100	152	196/100	148	4	Poor

1. Mean: ½ (Diastolic Pressure and Systolic Pressure)

the group. The results achieved in 18 of these 22 patients was "good," two manifested a "fair" response, and two others showed a "poor" response to therapy. In view of the total absence of any evidence of side effects or toxicity, it would appear that this combination is an exceptionally safe antihypertensive agent, particularly indicated for use in geriatric patients. It was well-tolerated even on prolonged therapy. Many of the patients became asymptomatic, no longer complaining of fatigue and weakness after therapy was instituted, the drug apparently improving their feeling of well-being.

TABLE II

DECLINES IN BLOOD PRESSURE FOLLOWING TREATMENT WITH RAUTRAX

mm Hg	*No. of Patients Showing Declines In*	
	SYSTOLIC PRESSURE	DIASTOLIC PRESSURE
0	0	2
1-10	2	9
11-20	3	9
21-30	6	2
31-40	8	0
41-50	1	0
51-60	1	0
61-70	1	0
TOTAL	22	22

CONCLUSION

This study, conducted on 22 geriatric female patients with moderately severe hypertension, has demonstrated flumethiazide-Rauwolfia serpentina whole root to be a most satisfactory antihypertensive preparation. A decline in blood pressure occurred in all patients, the general effect on the hypertension being considered "good" in 18 of the group. No side effects were seen. ★★★

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IT COSTS AND COSTS AND COSTS

Forand proponents seem to ignore the enormous costs involved in their plan of federal medicine. Authoritative estimates place the costs of hospital-surgical service to the aged under federal aegis at $2 billion annually. Social Security taxes would go to 9 per cent of wages almost immediately and up from that point. Take-home pay for all Americans would be progressively diminished.

Clinicopathological Conference III

Conducted by the Department of Pathology
University of Mississippi
School of Medicine

Jackson, Mississippi

On August 28, 1959, a 39-year-old white male was admitted to the University of Mississippi Teaching Hospital complaining of diarrhea of 3 months duration. Two months later he died. This case forms the basis for Journal MSMA's third CPC. Participants are Drs. John Robert Snavely, Herbert G. Langford, Thomas M. Blake, John Fenwick Jackson, Department of Medicine; Dr. Joel G. Brunson, Department of Pathology; and Dr. Robert Dye Sloan, Department of Radiology, all of the University of Mississippi School of Medicine. Dr. Catherine G. Goetz, Department of Pathology, prepared the report of the conference for the Journal.

THIS 39-YEAR-OLD WHITE male was admitted to the University of Mississippi Teaching Hospital on August 28, 1959, complaining of diarrhea of 3 mon duration. He had had two previous admissions, one in 1956 for duodenal ulcer and another in April 1959, for duodenal ulcer and Laennec's cirrhosis. Needle biopsy of the liver at the time of the second admission was interpreted as solitary focus of portal fibrosis suggestive of cirrhosis, but there was inadequate material for definitive diagnosis. Following discharge on May 1, 1959, the patient had done well until about May 21 at which time he first noted the onset of diarrhea consisting of seven to eight loose, watery stools each day. By July the stools had increased in frequency and were whitish in color and occasionally bluish-red. He continued to have cramping, mid-epigastric pain, and gaseous distention.

Physical examination on admission revealed a blood pressure of 110/70, pulse 90, respiration 20, and temperature 98.6°. The general appearance was that of a thin, severely malnourished, white male in no apparent distress. There was grade I hypertensive retinopathy. There were shotty cervical nodes bilaterally. The lungs were clear to percussion and auscultation. There was a regular rhythm of the heart without enlargement, thrills, rubs, or murmurs. The abdomen was scaphoid with tenderness to palpation in the mid-epigastric region. The liver, spleen, and kidneys were not palpable, nor were there any abnormal masses. The bowel sounds were fairly high pitched and diffusely hyperactive.

LABORATORY DATA

Blood count on admission showed a hematocrit of 40, hemoglobin 12.3 gm, 6,200 WBC, 37 per cent bands, 6 neutrophils, 1 eosinophil, 14 lymphs, 2 monos. The white count ranged from 4,300 to 8,050 during the course of the hospitalization. The hematocrit ranged from 40 down to 35 and to a high of 50. Schilling test on October 8 showed 6 per cent vitamin B_{12} excreted. Repeat Schilling test with intrinsic factor showed 4 per cent B_{12} excreted. Blood chemistries revealed serum amylase of 37 units, fasting glucose of 82 mg per cent and serum potassium ranged from 3.1 to 6.4 mEq/L during the hospitalization, serum sodium ranging from 118 to 131 mEq/L. Examination of the stools revealed increased fat, no growth on culture, and no trypsin on three occasions. Febrile agglutinations were negative except for typhoid "H"—1:80 and typhoid "O"—1:160. An oral glucose tolerance test revealed 70 mg per cent fasting, 80 mg per cent in 30 min, 168 mg per cent in 1 hr, 94 mg per cent in 2 hr, 79 mg per cent in 3 hr, and 118 mg per cent in 4 hr. A Thorn test revealed 17 eosinophils per cu mm before ACTH and 4 hr after 25 units of ACTH, 28 eosinophils per cu mm. Bone marrow aspiration revealed macrocytosis of erythrocytes

with generally normocytic normochromic cells. Platelet production was normal. The ME ratio was 6.6 to 1 with a shift to the left in the myeloid series.

X-ray of the chest revealed the heart and mediastinal structures to have a normal sized contour and to be in grossly normal position. There was considerable haziness in the basilar portions of both lung fields and there was an old calcified Ghon complex on the right. Upper GI series of August 31, 1959, revealed a minor deformity of the duodenal bulb with tenderness in this area. There was a coarsened mucosal pattern of the upper mesenteric bowel. Barium enema was normal. A fat absorption test employing nephelometry revealed practically no fat absorption following an ingestion of a breakfast containing 100 gm of animal fat. The electrocardiograms showed non-specific ST-T abnormalities and low QRS voltage. QRS changes consisting of QS deflections in V_1 and V_2 on one occasion and a QS deflection in leads 3 and aVf were suggestive of myocardial infarction, but in view of the series of tracings such diagnosis could not be established with certainty. Sigmoidoscopy to 20 cm revealed no abnormality.

PROGRESS OF CASE

The patient was placed on a gluten free diet for 28 days and pancreatin was given along with steroids without benefit in that diarrhea and abdominal pain continued. Levine tube feedings were attempted but weight loss continued and the course was progressively downhill. A duodenal biopsy October 8, 1959, was reported as showing normal duodenal mucosa. Gastric washings were negative for malignancy and there was no free acid in the stomach. On October 14 the patient had a psychotic episode and was described as being "wild." He responded at that time to intravenous glucose but the blood pressure was noted to be 80/60 later falling to 75/65.

The blood pressure failed to respond to Wyamine and he became unresponsive, requiring intermittent positive pressure breathing because of periods of apnea. Levophed was instituted with good response; however, increasing amounts of levophed were required and on October 23, 1959, 20 ampules of levophed per 500 cc of intravenous fluid were necessary. He was given whole blood slowly but became dyspneic. Following this he was digitalized and given diuretics with little benefit. His urine output was noted to be good during this episode, however. Thoracentesis on October 24, 1959, produced 700 cc of fluid from the right hemithorax. No fluid was obtained in three attempts to tap the left side. He had become unresponsive during the night of the 23rd and his condition remained extremely poor the following morning. He quietly expired at 12:15 p.m., October 24, 1959.

DISCUSSION

Dr. Snavely: "The fact that these exercises are being recorded for posterity does decrease to a certain extent the spontaneity which I customarily feel. However, I shall not let that make me too nervous and will have an opportunity, I am told, to edit these remarks reasonably carefully before they are exposed to the public eye.

"For the first time in several weeks I am not particularly happy with this protocol, and I would like to think that some important data which I should like to manipulate are in the record, but are not provided to me, perhaps by design. We know that this man is 39 and that he had had two previous admissions to this hospital, one in 1956 for duodenal ulcer and here is my first objection. I don't like to accept a diagnosis of duodenal ulcer just like that. Maybe he did have an ulcer. I would like to know what the evidence for it was, and I would like to know whether some of the symptoms of which he was complaining at that time might have been prodromes of the disease that carried him off. This terminal illness of his I don't believe is duodenal ulcer. So I would like for the benefit especially of the sophomores to mention that in recording histories we don't just take diagnoses for granted.

"If somebody had flu, we say, 'Just what do you mean by that? Do you mean you had a fever and that you coughed and that you ached all over and that sort of thing?' We don't just take duodenal ulcer for a diagnosis. Then he came back again in April 1959, and this time was apparently told again that he had duodenal ulcer and now cirrhosis of the liver got in the picture somehow. You will learn that most patients early in the course of cirrhosis of the liver don't have a lot of symptoms. Most of the manifestations we recognize, such as ascites, vomiting of blood from ruptured varices, coma, weight loss and that sort of thing are not so much manifestations of the cirrhosis itself as they are complications thereof, and the disease itself is relatively (although of course not absolutely) silent. Again I would like very much to know what symptoms brought him in, and what the basis for this diagnosis of cirrhosis was. A needle biopsy of the liver at that time was interpreted as showing a solitary focus of portal fibrosis suggestive of cirrhosis. Well, if that's all there was, I am not going to be happy

at all about the diagnosis, because I think that type of observation can be made on a lot of normal livers.

MAIN SYMPTOM: DIARRHEA

"Following discharge on the first of May 1959, the patient got along reasonably well for three weeks when he noticed the main symptom which will continue to plague him until death, diarrhea, and this apparently was a rather profuse diarrhea —seven to eight loose watery stools per day. By July they had increased in frequency, were whitish in color, and occasionally bluish-red. This was rather shocking color of the stool. I don't recall that I have seen bluish-red stools recently. If there were blood, we are not told anything about it later. He continued to have cramping, midepigastric pain, and gaseous distention.

"Now, in attempting to run this down further, I would like to know a lot of other things. I would like to know what kind of pain he had that led to a diagnosis of ulcer. I would like to know the quality of the radiologic findings, and no doubt Dr. Sloan will review those later. I would like to know something about his appetite. Most people with a malabsorption syndrome have ravenous appetites. They just eat tons and tons of food and get thinner and thinner and don't understand it. I would like to know whether he had arthritis or not. I would like to know how weak he became. I would like to know whether this had been an explosive weight loss, or whether he had been losing weight over a period of months. I would like to know what his blood pressure was during that period. I would like to know whether adenopathy was detected and would like to know whether he had purpura specifically. Well, maybe I will be filled in on some of those things later.

"Physical examination on admission revealed a blood pressure of 110/70 and the general appearance was as you note. He is very thin, severely malnourished, and he had (and this is rather quaint) grade I hypertensive retinopathy. I don't think that is a sound term to use in a patient who has never had hypertension to our knowledge and who later has a lot of hypotension. I suspect what they mean is that he had a degree of AV nicking, perhaps related to a degree of sclerosis of retinal vessels and I think it's a mistake to call that kind of change hypertensive retinopathy. Shotty cervical nodes bilaterally, clear lungs, nothing spectacular in the heart, and a scaphoid abdomen with some tenderness in the mid-epigastrium and no palpable organs. Bowel sounds—fairly high pitched and diffusely hyperactive.

"In the laboratory we are presented a hematocrit of 40, hemoglobin of 12.3, a white count which is rather interesting, I think, in that there are all these bands and so few mature neutrophils. The white counts ranged from 4 to 8,000 and the hematocrit from 40 down to 35 with a high of 50. Now here I will express my second bit of dissatisfaction. It helps me not at all to know that this man had a wide variety of hematocrits. It would help me to have these data integrated with his clinical course and the same thing is true of the serum potassiums which come up later. I am told it got down as low as 3 and as high as 6.4. Well, it's just completely valueless as far as interpreting unless we know what stage of his disease that corresponds to. I am going to say that I don't make a great deal out of this blood picture except that he apparently was anemic.

"Then a Schilling test was performed. Now for those of you who are not familiar with a Schilling test, this consists of giving a small dose of radioactive vitamin B_{12} by mouth and then giving a large "flushing" dose of non-radioactive B_{12} parenterally and measuring the radioactivity in a 24 hr urine sample. If the vitamin B_{12} is absorbed, normal people will excrete between 7 and 22 per cent of the radioactivity in their urine in 24 hr but those with pernicious anemia excrete as a rule

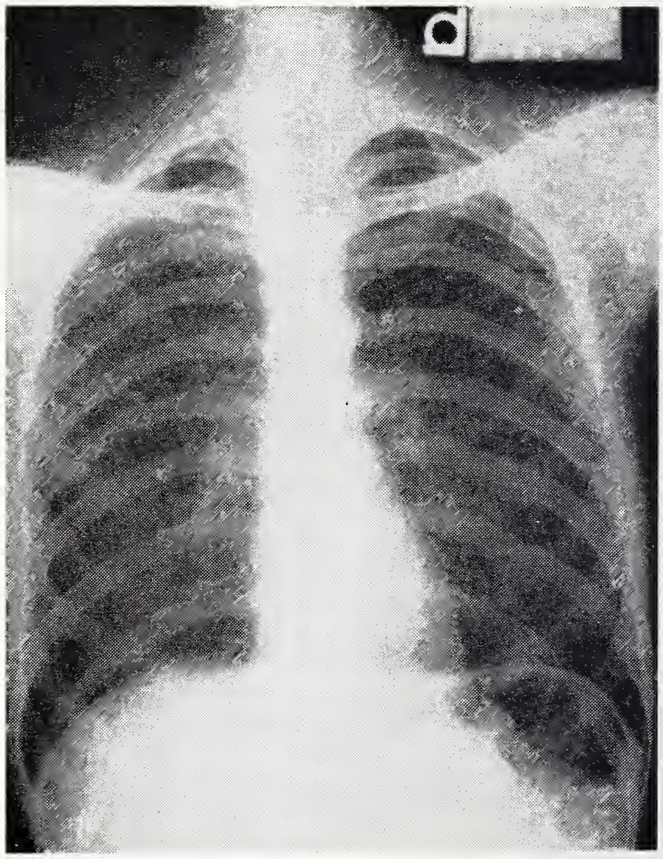

Figure 1. Chest x-ray at the time of admission radiographically normal except for calicified complex.

less than 2 per cent. If a low excretion is found, as was the case here, the test is repeated giving intrinsic factor. Patients with pernicious anemia will commonly show a spectacular increase. I don't want to get off in the pathogenesis of that sort of thing, but I will say that this test, if we can accept it, and I see no reason why we can't shows that the patient was unable to absorb vitamin B_{12} from his stomach with or without the presence of intrinsic factor. Now what this case is going to boil down to in my opinion (or if it doesn't I am going to be terribly wrong) is the differential diagnosis of absorptive defects of the gastro-intestinal tract.

DIFFERENTIAL DIAGNOSES

"Here I think I should say that I did see this man once with the residents while he was alive, and I didn't know what he had then and I never did see him again. I did not attend the autopsy and do not know the autopsy findings, so I feel perfectly free to speculate. Before going further into the laboratory work I want to put down a couple of differential diagnoses. I am going to say that it will become quite evident as we go along that this man's difficulty was in absorption of nutriments from his gastro-intestinal tract.

"I am going to put on the board a differential diagnosis. It breaks down into four categories. We will eliminate some of them. The first one is pancreatic disease in general and, of course, the specific defect here is lipase in particular. The second category of disease is loss of intestinal surface and this is the case when large amounts of intestine have either been removed or where short circuits have been deliberately established or when they have been established by nature. This is the second category of disease. The third category of disease (and this is the one on which we will concentrate more sharply) is reasonably specific entities involving the small intestine. A fourth and extremely uncommon variety is atherosclerosis involving the mesenteric vessels to such an extent that there is actual continuous ischemia of the small intestine and a failure of absorption on an ischemic basis.

"Now, I think it will become evident as we go along that we have no right to suspect this. The man is young and in a while Dr. Blake will tell us that he perhaps has coronary vessel disease, I see no real reason to invoke extensive mesenteric vascular disease to explain this malabsorption picture. By the same token what tests we have of pancreatic function are normal enough that I am willing to let that go by the board. As far as the loss of intestinal surface is concerned, I am not told anything in the protocol which allows me to suspect any kind of a short circuit or previous loss of intestine and unless Dr. Sloan can tell me otherwise, I am not going to fret further about that possibility.

Figure 2. Upper GI series showing coarsening of the mucosal folds of small bowel.

"I do believe that our problem is going to be one of these more or less specific entities involving the small bowel. I have listed them in the column on the left. They are as you can well read sprue, Whipple's disease (which I will have more to say about later), infiltrating lymphoma, particularly of the small intestine which would have to be almost exclusively of it in this case, chronic tuberculous enteritis with perhaps destruction of lymphatic drainage of the gut. This is the sort of thing I am told in the old days used to be called tabes mesenterica where the patients had tuberculosis (I believe it was commonly bovine tuberculosis) which destroyed the intestine to such an extent that it just couldn't absorb. Regional enteritis can produce this picture and some very rare dark horses are amyloid disease of the intestine, scleroderma of the intestine, and sarcoid of the intestine. I think our diagnosis is going to turn up in this pile and it's up to me to try to put the data which are turned up in the lab together, and to explain this picture somehow.

"Now we know he isn't absorbing from his stomach on the basis of the Schilling test. Blood chemistries showed a serum amylase which is neither high nor low, a fasting blood glucose

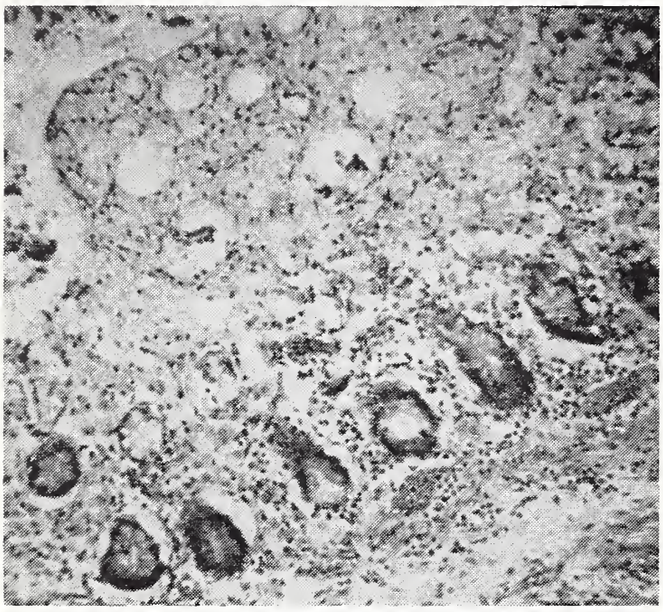

Figure 3. Jejunum showing lipid vacuoles in the mucosa and foamy macrophages. H & E × 100.

which is within normal limits and later a glucose tolerance curve which is reasonably normal. I think on a basis of the glucose tolerance curve I am going to place low on my list diffuse disease of the pancreas although I am aware that this does not absolutely exclude it. As I said before, the fact that he had hypokalemia once, and hyperkalemia at another time doesn't help. One would anticipate in this disease, if it were severe enough, that a failure to absorb potassium would be present and also there might be an increased excretion of potassium in the diarrheal stool. So hypokalemia is a reasonably consistent manifestation of malabsorption in general and may contribute to death in an extreme example. Serum sodiums likewise are on the low side, down as low as 118.

"Examinations of the stools revealed increased fat. Now this is a difficult thing to be sure of. The only way you can really be sure is to set up a fat balance, and we don't have the means for doing that. Quantitative estimates of the fat in the stool by ether extraction are difficult and again hard to interpret on a basis of wet weight. Staining of fat with sudan red or black is not particularly useful unless it is definitely positive, because a lot of the fat may be present as soap where I am told it doesn't stain. It is only if it is neutral fat that it will stain by this technique. I shall assume that an experienced observer said that there was increased fat in the stool. I am willing to accept this as being useful, fitting in with my diagnosis. This may be demonstrated in the texture of the stool.

"There was no growth on culture. If one feeds a standard fatty meal (and this test is well established), one can then draw samples periodically, and follow them over time and measure actually the opacity of the serum by nepholmetric techniques. Now nephelometry is nothing more than a technique whereby one admits a beam of light into a solution and measures the amount of light which is scattered to the side as contrasted with transmission techniques. It is the best index to relative opacity, I believe. Using this nephelometric technique one can establish a reasonably precise correlation between the increased opacity of the serum and the actual chemical amount of neutral fat therein. I thought that is what they meant. Now if what they are doing is counting chylomicrons that is something else again."

Dr. Langford: "They did both."

Dr. Snavely: "Well, fine. And they both showed the same thing? They showed that the patient didn't absorb fat and that's fine, because that's what we would anticipate if he had malabsorption syndrome.

"Someone did a Thorn test. The house staff was beginning to get nervous about Addison's disease and wanted to appraise the integrity of the pituitary adrenal axis, so they measured the total eosinophils before and after ACTH and found that they went up. Now I don't know what they did about this, but my inclination would have been to repeat it, because the count was abnormally low to start with. Perhaps Dr. Langford will comment on this. I don't elect to take that as any great bit of data to support a diagnosis of Addison's disease, although it is enough to make one worry. They did not go down. Would you comment on that right now, Dr. Langford?"

THORN TEST

Dr. Langford: "Yes, I think the main thing one could say, is that they shouldn't have done it, and in the first place it is a very poor test. In the second place you have to have around 400 before you can tell whether there is a significant drop and therefore if one were going to do this it would be much more reasonable to find out what it was initially and then decide whether you are going to put him through 4 hr ACTH drip. You are right, a stressed person often has no eosinophils."

Dr. Snavely: "All right. If they were taking Addison's disease seriously, one should have ap-

praised the levels in the blood of glucocorticoids and also the levels in the urine of hydroxycorticoids and 17 ketosteroids, but apparently they didn't take it seriously, and did not push on. Nothing too much else in this part. There was macrocytosis of the red cell series which would make us suspect that there was a degree of vitamin B_{12} deficiency which would go along with our Schilling test but, in my opinion, would not support a particular diagnosis of pernicious anemia in this patient. The M:E ratio is on the high side. I don't find this sort of thing useful, perhaps because I don't work with it, but there were relatively more myeloid cells than erythroid cells or relatively less erythroid—I don't know which they are referring to.

"Dr. Sloan, before you show the x-rays, I want to ask a few specific questions. Is there any evidence of tuberculosis anywhere in this man's body? Is there any evidence of short circuiting or loss of small intestine? Is there any evidence of the pooling-segmentation sort of thing that we see in the malabsorption syndrome?"

Dr. Sloan: "The patient had multiple x-ray studies extending from September 1956, through October 1959. Routine chest films in 1956 and in April 1959, are similar and essentially normal in appearance. There is a calcified primary complex present, Dr. Snavely, most commonly representing the residual of childhood tuberculosis or histoplasmosis. Two portable chest films were obtained during his terminal illness. These reveal progressive parenchymal mottling and infiltration bilaterally, most marked on the left. In addition there is evidence of a pleural reaction on the left, undoubtedly representing fluid. Since these films were taken in the recumbent position, the amount of fluid present is in all probability even greater than one would suspect. The explanation for these parenchymal and pleuritic changes is not obvious. I suspect that they represent some terminal episodes such as aspiration pneumonia or perhaps a staph pneumonia. The pattern is more extensive than is customary in the every day terminal bronchopneumonia, and the normal sized heart argues against congestive failure.

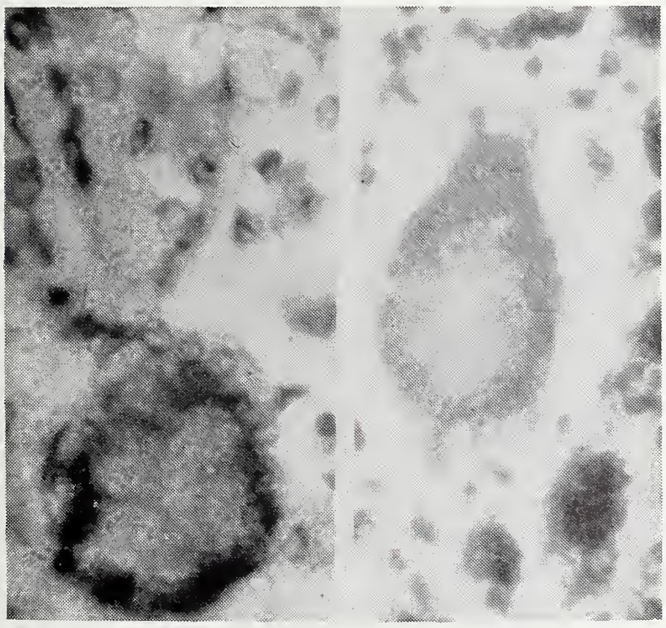

Figure 4. Jejunum showing dark PAS-positive granules in "foam cells." H & E left, PAS right × 430.

X-RAY STUDIES

"A plain film of the abdomen in April 1959, reveals no abnormalities, save for some sclerosis adjacent to the right sacro-iliac joint. Dr. Snavely will want to discuss this later.

"During the 3 yr period the patient was followed by us, he received numerous examinations of the gastro-intestinal tract. The first GI series was in September 1956, at the time he came in with his supposed duodenal ulcer. There is on the films some minor deformity of the duodenal bulb, undoubtedly secondary to peptic ulcer disease, but as indicated the changes are minimal and there is no evidence of an actual crater or other signs of activity of the process on any of our studies. A small intestinal study was not done at this time, but on the routine films of the upper gastro-intestinal tract there is filling of a considerable amount of small bowel. The mucosal folds in the jejunum and proximal ileum appear quite coarse, the pattern being otherwise unremarkable in appearance.

"In April 1959, another GI series was performed, and on this occasion a small intestinal study was obtained as well. The transit time of the barium meal through the small intestine is within normal limits, for the barium preparation we use, the head of the column having reached the cecum at the end of 30 min. The most striking abnormality on the films is the unusually coarse or thick mucosal folds extending throughout the entire length of the small intestine. On some of the later films there is evidence of slight clumping and segmentation of the remaining barium in the small intestine. It should be pointed out that with the so-called micro-pulverized barium one is less likely to get the so-called deficiency patterns than with coarser barium preparations.

"Another small bowel study, roughly two months prior to death, reveals the same pattern. Barium enema studies revealed no evidence of colonic pathology.

"In answer to Dr. Snavely's specific questions, there is no evidence of short circuiting or loss of small intestine. There is evidence of a spruelike or so-called deficiency pattern involving the entire small intestine. As you are well aware, this pattern is not specific for any one disease, there being a variety of clinical conditions with which such patterns may be associated. Objectively most of the conditions listed by Dr. Snavely could produce the appearance shown in this case, although some of them are less likely than others. For example, it would be unusual for regional enteritis to involve the entire small intestine without evidence of progression into the more classical stenosing lesions during the time the patient was followed."

Dr. Snavely: "Well, this is most helpful indeed, and I think we can proceed as I hoped we would in the beginning. This problem is the differential diagnosis of the malabsorption syndrome. Now we will go on with a little more of the protocol here. Dr. Sloan has given us everything about the x-rays. The electrocardiogram, Dr. Blake, would you want to comment on whether we think this man is going to show a myocardial infarct or not? I don't believe that's germane to his central problem, but it would be nice. Sigmoidoscopy was negative. The patient was placed on a gluten free diet, was given pancreatin along with steroids. Now I don't particularly like this steroids business. I would like to know what steroid, how much and how long, but perhaps I can assume that my colleagues gave a good steroid in large enough doses long enough to see whether it was going to have an effect or not. Shall we see these now?"

ELECTROCARDIOGRAMS

Dr. Blake: "The first tracing was made in 1956 on his first admission here and is shown as a control. Notice particularly in the right precordial leads nice, clean, sharp initial positivity in the QRS complex with P waves in the same direction —a normal tracing. The next tracing was made one midnight after the patient had just had some sort of hypotensive episode and here we have no initial positivity at all. By the time we get to V3 there is just a little bit of initial positivity, and it's slurred and abnormally shaped. The P waves are negative and in general the electrocardiogram is pretty badly abnormal. The note on the requisition implied that the patient had just narrowly escaped sudden death about this time with some sort of a hypotensive episode. It is not at all unusual to see abnormal ST-T complexes under those circumstances, but I find it difficult to explain these QRS changes, Dr. Snavely. This is the part that the protocol indicated was confusing. The next tracing was made some days later and shows the same kind of abnormalities, but much less marked. I would say that I can't diagnose myocardial infarction from this series, but it does bring up the subject of infarction and in the protocol I don't think it's terribly important."

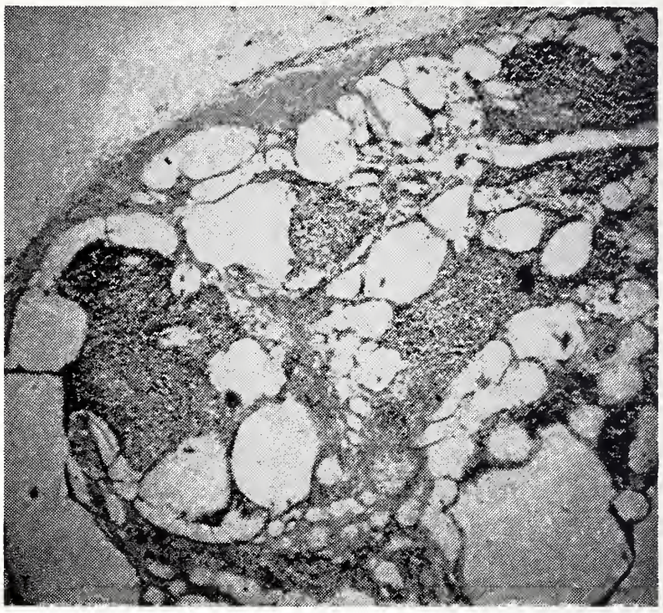

Figure 5. Mesenteric lymph node showing architectural destruction by large vacuoles, with a portion of capsule visible at the left upper margin. H & E × 32.

Dr. Snavely: "Thank you very much. He had some sort of a heart attack in there on his way out, I guess, and his coronaries did suffer some, but as I said previously, I don't believe that's intrinsic to his diagnosis. Now you could speculate this way if you wanted to. You could say, well there is evidence of atherosclerosis in one important system of blood vessels and perhaps he has the same sort of thing going on in his mesenteric system and you could then advance that diagnosis. I don't find that attractive, because I think there are other ways it can be put together a little bit better. Forced feedings were attempted, but didn't help. Now I think this is of some importance, and I really could talk all day about this problem in general.

"Wheat gluten in some fashion or other does contribute to the disease we recognize as sprue and as celiac disease and in a fair percentage of these patients placed on a gluten free diet show sharp improvement. This man did not. Those who do not show a great deal of improvement on this commonly improve when given glucocorticoid. This man did not. And again I am assuming he

did get respectable amounts. Instead of getting better on what ought to be pretty good treatment, he got worse. A duodenal biopsy was done and was reported as showing normal duodenal mucosa and perhaps we will have an opportunity to see this. I wondered if that was stained with PAS stain and that sort of thing. It was stained and it didn't show any positive material. Gastric washings were negative for malignancy and there was no free acid. This is a little tardy, after the high powered Schilling test. One would think we would have gotten a rather mundane test like this before this big radioactive test. But that's the way things are these days, I guess. We continue to fight it, however. It's a losing battle.

"Had a psychotic episode and was described as being 'wild.' Now here I am a little disturbed that this is appearing on one of our charts, because it seems to me that this would call for an extensive description and whatever laboratory work we could get. He responded to intravenous glucose and this pains me a bit. Was his blood glucose low? Is that why he responded? Was this a hypoglycemic episode or did he get over it while he was getting some panic treatment? I don't know. Perhaps the doctors will be able to tell us in a little bit. His blood pressure did fall. He was put on pressors but died without relief. I think that we can speculate a bit about the terminal episode, if we wish. Perhaps it was pneumonia as Dr. Sloan has suggested, perhaps it was a coronary insufficiency as Dr. Blake has indicated, perhaps it was congestive heart failure. I don't think we know.

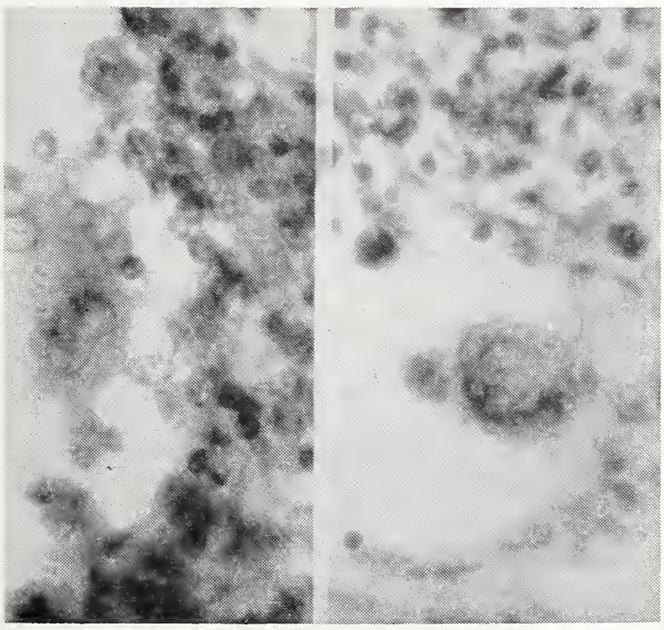

Figure 6. Mesenteric lymph nodes showing giant cells. H & E left, PAS right × 430.

"I am going to eliminate pancreatic disease, because we don't have any particular right to invoke it. I am going to rule out loss of intestinal surface and the things that go with it, because Dr. Sloan hasn't been able to help us any on that. I am going to eliminate mesenteric vascular disease on a basis of his age and because it simply doesn't appeal to me tremendously. I have no peripheral manifestations of the scleroderma to help me here. This is so rare that people report individual cases, and I am not going to worry about it. If he has amyloidosis, it is the primary variety and I see no evidence of it elsewhere in the body that allows me to speculate about it. If he has regional enteritis, it escaped Dr. Sloan's detection, and I think that is quite unlikely. People don't have tuberculous enteritis these days, I am told, unless they have a lot of tuberculosis in their chest, which he didn't have, so I will not pay attention to those little calcific places, and I am going to say he doesn't have bovine intestinal tuberculosis and tabes mesenterica.

WHIPPLE'S DISEASE

"I think if he had sprue he would have responded to the treatment administered. If he had just the biochemical disease of the intestinal mucosa we call sprue, I think that he would have responded to treatment. Now I can't diagnose Whipple's disease on positive grounds because I have no biopsy proof. There is a superb review of this disease in the *Quarterly Journal of Medicine,* April 1959, by Farnan of London. He says that the disease practically always has a prodromal period and then a period of malabsorption. Now I am not given the privilege of knowing about prodromes on this man, and I would like very much to know whether he had arthritis or not. Dr. Sloan has already told me that he has some changes in the sacro-iliac joint which is one of the kinds of arthritis that go with this. I would like to know whether he had pigmentation or not and I would like to know whether anything more is known about purpura or weight loss."

Dr. Jackson: "It was noted by one observer that he had what was considered a vague history of polyarthritis about 5 yr prior to his first admission."

Dr. Snavely: "Well, if I had known that I wouldn't have had to talk so long. This paper has a couple of points: in trying to distinguish Whipple's disease from the malabsorption syndrome in sprue, the people with Whipple's disease tend to have more occult blood in their stools. Perhaps I can take the bluish-red stools as indicating

blood. The second thing is that patients with Whipple's disease have a lot more gastric achylia than the people with just sprue do. This man did have achylia. A normochromic or hypochromic anemia is invariably present in Whipple's disease and not necessarily present in idiopathic sprue. The last thing that I learned in my studies was that radiologic investigation commonly shows gastric or duodenal deformities in Whipple's disease and it doesn't consistently at all in idiopathic sprue. So I, therefore, select as my diagnosis Whipple's disease, or intestinal lipodystrophy. My second choice, but it doesn't do any good to have a second choice, will be sprue, and I can't explain why he didn't respond to treatment. I think he may well have had some terminal pneumonia, but dying of starvation is the rule in Whipple's disease, although the patients not infrequently do respond to steroids."

Dr. Langford: "I would like to ask—what percentage of patients with Whipple's disease have negative node biopsies, and I believe he had a negative peripheral lymph node biopsy."

Dr. Snavely: "If a peripheral node had shown characteristic lesions or characteristic PAS positive material, that is diagnostic, I am told."

Dr. Brunson: "Dr. Langford, we felt this fellow might have been a blue blooded Virginia cavalier. Dr. John Jackson did the autopsy on this case and then looked up some literature and has some slides and he will explain the findings to us."

AUTOPSY REPORT

Dr. Jackson: "The anatomical diagnoses were: Whipple's disease, or intestinal lipodystrophy, and a complicating factor of chronic constrictive pericarditis which we will discuss later. The chronic constrictive pericarditis we think is associated with the primary disease. He also had pulmonary emphysema and pulmonary edema terminally. The gross findings at autopsy revealed about 1,000 cc of clear yellow fluid in the left pleural cavity and about 700 cc of similar fluid in the right pleural cavity. The pericardial cavity was completely obliterated by fibrous adhesions between the visceral and parietal pericardial surfaces and the parietal pericardium was adherent to the mediastinal structures as well. The heart weighed only 265 gm, but the left ventrical was moderately dilated. The right lung weighed 700 gm and the left lung 560 gm. There was a moderate amount of pulmonary edema and several emphysematous blebs were noted at the right apex. The striking findings were related to the abdomen. There was about 500 cc of clear yellow fluid present in the free peritoneal cavity and the mesentery and retroperitoneal areas contained large lymph nodes that were pale ivory in color and exuded clear fluid on section. There was a rather granular appearance of the mucosal surface of the small bowel with increased folds of the jejunum. This had the appearance that the bowel mucosa had been dusted with talcum while it was wet. Many large nodes could be seen in the mesentery.

FURTHER FINDINGS

"Low power microscopic examination of a cross section of the right ventricle revealed marked pericardial thickening. A sudan IV fat stain of the jejunum revealed large vacuoles within the lamina propria of the intestinal mucosa which stained brilliant orange with sudan IV indicating collections of lipid. A lymph node showed similar lipid collections, mostly in the subcapsular areas. A high power section of the small bowel stained with hematoxylin and eosin revealed vacuolar spaces lined by endothelium where the lipid had been dissolved in preparation of permanent sections. This lesion contained macrophages with foamy cytoplasm that surrounded the individual nuclei. With PAS stain some of the foamy macrophages were noted to contain small PAS positive bodies which, as has already been mentioned, is actually a mucopolysaccharide. A section of a mesenteric lymph node showed that the entire lymph node structure was completely destroyed in that the lymphoid follicles were absent and there were large vacuoles, again lined by endothelium and occasionally containing giant cells. The giant cells typically appear along the periphery of vacuoles. The remainder of the stroma was made up of foam cells and lymphocytes. There were scattered large pale macrophages which with the PAS stain showed the typical PAS positive bodies some of which could be seen in the large giant cells.

"Dr. Snavely and I have both used the same reference here. The chart that came from Dr. Farnan's article in the *Quarterly Journal of Medicine,*[1] shows that the mesenteric adenopathy and the Schiff positive macrophages are by far the highest percentage of pathologic findings in some 67 cases that have been collected from the literature. The other thing that I would like to point out specifically here would be that pericardial adhesions are found in some 40 per cent of cases.

"There is a further point that I would like to make here and that is that it's entirely possible that this man's mode of exodus was due to the peri-

carditis which was associated with the basic disease. Robbins has grouped pericarditis of this character, which is actually healed chronic pericarditis rather than acute pericarditis, into four groups. First is fibrous thickening of the pericardial surface which is what is referred to generally as soldier's plaque or just whitish thickening of the visceral pericardium. The second type is focal or diffuse obliterative pericarditis which leaves the function of the myocardium normal and only forms thin fibrous bands.

"Then the next in degree is adhesive mediastinal pericarditis which is commonly associated with bacterial infections or tuberculosis. This is the type that shows the rare case of what is considered clinically constrictive pericarditis, but yet has a tremendously enlarged heart. This has been explained by the fact that as well as pumping the blood against the intraventricular systolic load, the myocardium must also pull against the load of the attached pericardium which in turn is attached to all mediastinal structures. This has resulted in some of the largest hearts seen. Fourth is constrictive pericarditis which in its milder form is referred to as concretio cordis where large plaques of fibrous pericarditis have calcified and actually don't cause a great deal of difficulty. However, this fibrous pericarditis may extend until it is 0.5 to 1 cm thick and may be so dense that the heart is unable to dilate and the dilatory cardiac reserve is lost completely. I think probably this case fits somewhere between the adhesive mediastinopericarditis and the constrictive pericarditis classifications. In the absence of any other findings and in the documentation that we have here of 40 per cent of cases of Whipple's disease having pericardial adhesions, I would like to include this as part of this man's basic disease.[2]"

Dr. Brunson: "Thank you, Dr. Jackson and Dr. Snavely for a very interesting discussion."

Dr. Snavely: "I want to ask about the ulcer and the liver. There was a diagnosis of cirrhosis of the liver made once here."

DIAGNOSIS OF CIRRHOSIS

Dr. Jackson: "The cirrhosis of the liver was just a small patch of fibrosis on the original needle biopsy and apparently the pathologist was right in not making the diagnosis on the basis of such a small bit of material. There was some slight increase in portal connective tissue at autopsy, but one could not make a diagnosis of cirrhosis. While I mention this with respect to the liver biopsy, the duodenal biopsy was also very small and was in fact normal mucosa. However, at the time of autopsy the duodenum was involved as was the jejunum with the disease process. Sections of the original biopsy were destained and restained with PAS looking for the PAS-positive bodies. Apparently they were just very unlucky in happening to get a small section of the duodenum that did not have this material in it."

PERIPHERAL LYMPH NODES

Dr. Langford: "Were peripheral lymph nodes examined?"

Dr. Jackson: "Unfortunately, they were not. Although this diagnosis was suspected at the time of gross dissection, the nodes were not taken simply because we didn't realize at the time that it was of such importance. Apparently the diagnosis can be made with accuracy on lymph node biopsy by the PAS stain and has been on one such occasion prior to autopsy.[3] One other point with respect to the PAS positive bodies. Still by far the most well studied case was Whipple's original case back in 1907,[4] and although at the time he did not use a PAS stain he did use a Levaditi's stain presumably looking for spirochetes. He found bodies which were apparently the same that stain with PAS and he questioned whether or not they were microorganisms at the time. Later the substance was actually characterized as a mucopolysaccharide."

Dr. Snavely: "Has anybody got any ideas about what goes on?"

Dr. Jackson: "Two or three of the cases have been studied to the extent of dissecting out the thoracic duct in its entirety and it's always been found to be patent when it has been dissected out. In spite of this, people persist in saying that the etiology is obstruction of the lymphatics. This may be true out in the villous processes, but has not been demonstrated in the larger lymphatic vessels."

Dr. Snavely: "Do I have this right? They thought that this material in some fashion or other does block the lacteal. Is that right?"

Dr. Jackson: "That is correct." ★★★

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Political Action by Physicians

C. G. SUTHERLAND, M.D.
Jackson, Mississippi

Politics is everybody's business, says Dr. Sutherland. The physician, because of his education and influence, has an especial obligation to be a leader in the community, according to the author.

"The price of good government is the substance, time, and talent of good men," he concludes.

IN THE JUDGMENT OF MANY, the American public has been a target for a campaign reflecting unfavorably upon the democratic government of our free society. Whether calculated or inadvertent, its tragic consequences are the same. If present misconceptions so readily and naturally attached by so many to our free institutions are perpetuated, the inevitable consequences are unpleasant to behold.

Within the week, you may have heard these phrases spoken with inflections ranging from resignation to disgust to contempt:

"We'll leave this to the politicians . . ." *or* "Our view is, of course, non-partisan . . ." *or* "I simply can't afford to get mixed up in politics. . . ."

Each phrase has this in common: It is a fallacious, misguided concept because politics *per se* is honorable and the fact of the matter is that everyone is partisan as surely as they are male or female. It would, therefore, appear that some are ashamed of democratic political processes while others are completely misinformed as to their purposes and parts.

A substantial majority of the American people criticize and complain as regards our governmental institutions and the people who serve them. Most such critics have done nothing to correct the situation with which they say they are dissatisfied. Almost without exception, such criticism and complaint occurs *post facto* to elections, legislative enactments, or executive action.

A physician is basically a scientist and he, therefore, can appraise an issue objectively. Yet, many doctors are essentially subjective about public and economic issues. Whether we like it or not, the American physician is an influential member of our free society, and he has an obligation to fulfill a role in community leadership in the public interest. My thesis, therefore, is the call of duty beyond nominally stated citizenship demands—a call of duty which no doctor of medicine should refuse to answer.

It is unfortunate that the terms "politician," "lobbyist," and "political action" have come to have unsavory connotations in some usage. There may be bad people in our system of free government, but the system itself should never become a target for destructive, vicious attack. Conversely, our job is to serve others and ourselves by a rededication to constitutional government within the sacred framework of its initial concept.

So let's get straight on a few definitions. We've considered the term "politician." The correct definition is ". . . one versed or experienced in the science of government; one devoted to politics, hence, a statesman." But the influence of the

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Secretary, Central Medical Society.

Read before the State Medical Legislative Conference, Mississippi State Medical Association, Jackson, November 12, 1959.

times is ever with us for this same learned source goes on to state that in modern usage, "politician" carries an implication or suggestion of "artifice or intrigue."

HONOR DUE STATESMEN

To correct a situation, we must first correct ourselves and make certain that we are not contributing to the wrong we wish to rectify. We must reattach the honor and prestige due to the term "politician." If we become convinced that a figure in politics is not acting in the public interest, then we have a duty to seek his replacement by a worthy successor to whom proper respect and prestige may rightfully accrue. If we in informed capacities permit any uncomplimentary connotation of designations for those in government, then we are simply showing our own lack of understanding.

Another example of clever perversion is the connotation attached to the term "lobbyist." As with politicians, physicians, or what-have-you, there are also good and bad lobbyists. This does not in the least, however, alter the fact that a lobbyist has a useful, respectable function. Those who cultivate members of the various lawmaking bodies with propriety and restraint in the interest of a meritorious cause perform a good service. After all, many of us lose sight of our right to petition these lawmaking bodies. There is nothing dishonorable in resorting to private representation under stated circumstances to achieve this end.

WRITING TO CONGRESS

There is no justification, then, for our using the expressions "lobbyists" and "lobbying" in the contexts of dishonesty, influence-peddling, and sly manipulation. Similarly, it is not merely proper for us to appear before committees of the Congress to discuss our views, it is our duty in the interest of good government. We have both the right and responsibility to approach members of the Congress privately and tell them what we think about public issues. When we do not do these things, we turn our backs upon responsibilities which accrue to all good citizens.

With these definitions and clarifications in mind, we should be able to agree that physicians must become more active politically in the interest of their profession and the public they serve. If this be true, then what is the protocol for effective, proper political action by physicians?

Obviously, the first task is to inform ourselves. If we do not understand the issues before our lawmaking bodies, then we are not in position to assist in reaching good solutions. The surest sign of political ignorance is the exhortation to a congressman to vote for or against something simply because one says it is good or bad.

Our Mississippi representatives and senators are courteous and gracious in receiving us and the letters we write. But, surely, their patience must be tried when they receive such a useless communication from anyone in our state, most especially, a doctor of medicine.

REASONABLE OPPOSITION

Perhaps the congressman who, after all, is highly conversant with the proposal under discussion may believe it to be constructive and necessary. When a constituent opposes it without stating a reason, then his views are of no benefit at all to the dedicated member of Congress. With a quarter of a million constituents, the congressmen simply can't come home and find out what pleases everyone. Therefore, he appreciates a clear, concise statement from any constituent expressing a reasonable view on any legislative matter, but he needs to know the reason for the constituent's position.

So the first thing the physician must do is to learn the issue and be prepared to explain his position. Then he must communicate.

Since nearly every member of the Congress receives a hundred or more letters for every personal visit in his Washington office, the daily mail is his link with his state or district. It can be valuable or it can be useless. The thoughtful letter, well written, with the issue and viewpoint concisely stated is welcomed by the member of Congress. On the other hand, the pre-printed post card designed to "shower" the Congressman with exhortations or protests is easily identified. Of course, we in medical organization condone no such practices, but mail of this nature is received in Washington and our conscientious lawmakers promptly speed it on its way to the scrap paper drive.

RESPECT FOR LAWMAKERS

Thirdly, physicians should need no reminder to accord our national lawmakers the respect which their high offices command. Most members of the Congress serve at considerable personal sacrifice. Unless a member has private income, the modest compensation for so responsible and demanding an office evaporates with taxes, the maintenance of two households, and necessary expenditures for which there is no remuneration. The congressman doing a good job merits not only our respect but our support.

POLITICAL ACTION / Sutherland

It's hardly enough to pat a senator or representative on the back, send him a Christmas card, or invite him to the Rotary Club as a gesture of appreciation for dedicated service to the state and nation. We should certainly make these minor expressions of appreciation freely, but in the interest of good government, we should rally to his support at election time.

THE PHYSICIAN'S ROLE

Doctors should serve freely on committees and in county and state political organizations dedicated to support of candidates of their choosing. Good government is something men and women have died for. Yet there are those who seem to feel it is an automatic process. Edmund Burke's celebrated utterance may be trite but to me, it is always worth repeating: "To assure the triumph of evil, it is only necessary that good men do nothing." In every political campaign from the president down to the constable, each physician should be active according to his means and ability.

In important offices—and which one is not—a doctor should meet, hear, and evaluate all candidates. Each issue should be carefully considered. The physician should declare his support for the candidate of his choice and then assist him vigorously in winning the election. Political campaigns are unbelievably costly, and we should consider it a privilege of free men to contribute to the candidate we are supporting. You can rest assured that our adversaries are giving generously to theirs.

These things we should do not in the interest of currying personal favor because if this be our objective in political action, then our efforts are sadly misdirected. Support of our candidate should continue after his election to office and we should be willing to assist him in crystallizing local opinions and backing for good and necessary legislation.

It's not a question of being a good citizen in the community of professional and public affairs for selfish reasons. It is the obligation and responsibility of every doctor everywhere to exercise the same dedication toward the preservation of freedom's fundamentals as may be exercised in behalf of his professional career. Eternal vigilance is the price of liberty. The price of good government is the substance, time, and talent of good men. ★★★

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MANY HAPPY RETURNS

April 15 is the day to count your blessings—before sending them to the Internal Revenue Service. . . . There's a new short form available for use by physicians in reporting income for tax purposes. It contains only three questions: "Doctor, how much money did you make last year? Where is it now? When may we have it?" *(S. Lamar Bailey, M.D., Kosciusko).* . . . April is the month when even the dullest people come up with clever deductions.

Veterans Hospital Abuse and Misuse

AMOS R. KOONTZ, M.D.
Baltimore, Maryland

Dr. Koontz, a veteran of two world wars, attacks the present veterans hospital program. He charges that the institutions have been misused and that the original object of the VA hospitals—the care of veterans disabled in war—has been forgotten by politicians and bureaucrats. Patients with non-service-connected disabilities get better care than those with service-connected disabilities, according to the author. Dr. Koontz urges that medicine, collectively and individually, push for adequate congressional hearing and corrective legislation.

MANY READERS OF THIS ARTICLE, especially many veterans, will no doubt be surprised at the title of it. However, the title was not used inadvisedly or without forethought. Neither is the article written by a non-veteran about men who wore the uniform, the author himself being a member of the American Legion, and having served in France for 20 months in World War I and in the Pacific for 43 months in World War II.

This article is not written from the point of view of a veteran or a non-veteran, but from the point of the average American citizen, who is interested in the welfare of his country.

LAW—SEEMINGLY HARMLESS

By the enactment of a seemingly harmless law, a great abuse in veterans' medical care has come about. In the 1920's a law was passed which allowed veterans with non-service-connected disabilities, who were unable to pay the cost of private care, to be taken care of in VA hospitals if there was space available. That "if" was the Ubangi in the cordwood. (I have to speak carefully—the Supreme Court may be listening.) It seems a very harmless provision of the law to allow a needy veteran hospital care if there is space available in the veterans hospitals. (No thought was apparently given by the Congress, which passed the law, to the doctrine of local self-government, upon which this country was founded, and to the fact that the care of the needy is a local responsibility, and not a federal responsibility.)

But what happened? It is common knowledge that the privilege has been abused in the most flagrant fashion. Here is a factual case in point: A veteran, now 30 years of age, who had been discharged from the service on March 9, 1954, entered a VA hospital on November 29, 1958, with what was said to be a heart attack. He remained in the hospital until January 5, 1959. He began receiving a pension of $66.15 a month in April 1959. He was apparently encouraged by the VA to apply for a pension and was given a note by them which he carries in his wallet, which reads as follows: "To keep pension you are unemployable but can, if possible, take an easy job for two or three days a week—four hours a day, and payment must be below $2,700 a year (entire income must be below $2,700 a year)." The veteran had a good job before entering the VA hospital. He has now been pronounced physically fit by two good doctors. Why should the taxpayers have to pay this man's hospital bill and why should we pay him a pension of $66.15 a month for the rest of his life, which may stretch out to be a very long one?

CADILLACS NO HINDRANCE

Men driving Cadillac cars have driven up to veterans hospitals and claimed admission because they were indigent. Other men (all with non-service-connected disabilities) have gone to VA hospitals with the same claim and with several thousand dollars bulging their pockets. Their word had to be taken. They did not even have to furnish any evidence that they were indigent and did not have to sign a statement under oath. One man had a leg amputated for a non-service-connected disability in a civilian hospital. He wanted to get the govern-

ment to pay for his prosthesis but could not get this done without being admitted to a veterans hospital. He got admitted on some pretext (it does not take much) and then after being admitted, the policy being to give him everything he wanted, he got his artificial limb at the taxpayers' expense.

THE EMPIRE BUILDERS

These things are so palpably wrong as to be revolting to any citizen with a sense of decency and fair play. The unsavory condition has been partly responsible for a large percentage of the original consultants, among whom were many outstanding medical figures, either resigning outright or becoming inactive in their VA consulting. Many of the original chiefs of service have left the VA hospitals because they were frustrated by the inept policies and practices of the Veterans Administration.

But what an opportunity for the empire builders! And you may be sure they were not long in grasping the opportunity. Politicians (not statesmen) eager for the veterans' votes clamored to build more and more VA hospitals, even when there were plenty of vacant beds in the existing hospitals. This was really a dish for a congressman if he could get the hospital built in his own district.

The result is that now we have many more veterans hospitals than we need (172, which treat approximately 500,000 patients a year) and as a rule they are about half empty. This is part of the price that average citizen John Q. Smith pays for getting his congressman re-elected.

A further result is that now more than 85 per cent of the patients in our general VA hospitals have non-service-connected disabilities. This has resulted in several evils, which will be discussed seriatim.

SYSTEM—BAD FOR VETERAN

The system is bad for the veteran. Many veterans with some semblance of pride left, who would ordinarily never think of asking for free medical care, seeing many other non-indigent veterans with non-service-connected ailments getting on the gravy train, say "Why shouldn't I?" This is a natural reaction. Their taxes are paying for free medical care for their fellow veterans and, although realizing it is wrong, they do it also as a matter of self-defense. The same thing was true of the soldiers' bonus in the 1930's. Many veterans were opposed to it and wrote their senators and congressmen asking them to vote against it. Yet when the bill was passed, they took their share also, because their taxes went into the kitty.

Even if only indigent non-service-connected cases were accepted in veterans hospitals, the system would still be wrong because it is a duplication of local facilities for the care of the indigent. This duplication necessarily increases our taxes. But who would dare think of taxes any more except the politicians who impose them on us? We are supposed to bow our heads and accept the inevitable.

One of the worst features of the VA hospitals, loaded with non-service-connected cases, is the effect that the system has on our civilian hospitals. This is the way it came about: It is common knowledge that before World War II our veterans hospitals were rather miserable institutions, where veterans did not get the best medical care. After World War II the government took steps to remedy this situation. As most veterans hospitals were located near medical schools, the medical schools were asked to form Deans' Committees, who would furnish consultants for the VA hospitals. The object of this was to improve the medical care. (Definite efforts were also made to improve the staffs of the VA hospitals.)

EFFECT ON CIVILIAN HOSPITALS

The medical schools accepted this function as a patriotic duty and responded nobly. The consultants appointed by them gave the VA hospitals an academic status. The consultants are largely responsible for the excellence of the residency training programs.

The medical schools naturally thought that the part they were playing in the program was to provide better care for disabled veterans with service-connected disabilities, who were returning in great numbers from overseas. But that is not the way it turned out. The affiliation of the medical schools with the VA hospitals enabled the latter to build up tremendous residency training programs and this resulted in enormous expansion of the patient load. This expansion could only have been obtained by the VA hospitals taking in veterans with non-service-connected disabilities, as the number with service-connected disabilities gradually petered out. The VA officials readily admit that they could not carry on their residency training programs without the admission of veterans with non-service-connected disabilities. The medical schools have played an unwitting part in their program.

What do the medical schools get out of it? Of course, the fees for the consultants go to the in-

dividual consultants. The medical schools do, however, get some VA grants for research. I am told, though, that these grants are given sporadically and that the medical schools cannot count on a continuing program. They will get an organization set up for a certain research project only to find that the organization has to be disbanded at the end of the year because of a failure to continue the grant for the research.

But this is not the real question. The real question is: Is the affiliation of our medical schools with the VA hospitals in the public interest? I doubt if the medical schools have taken the trouble to re-evaluate the situation. What started out as a patriotic duty became a habit, which is natural, but hardly desirable. But even if the medical schools thoroughly disapproved of the present system, and I believe that most of them do, they could hardly take the stand necessary to abolish the Deans' Committees because there would immediately be raised a hew and cry to the effect that they were against veterans. They are, therefore, in a dilemma not of their own making. However, the present system has resulted in three evils not at all anticipated when it was started.

In the first place, the building up of the residency systems in the VA hospitals has resulted in a depletion of the number of residents available for our civilian hospitals. This has caused the civilian hospitals to accept foreign interns, many of whom are good, but many of whom are undesirable, especially because of language difficulties. If the almost 3,000 residents now in VA hospitals were freed for positions in civilian hospitals, the resident problem in civilian hospitals would be solved.

DUPLICATION OF EFFORT

In the second place, it has resulted in a most undesirable type of empire building. More and more veterans hospitals have been built (and probably will continue to be under the present system). Politicians anxious to get votes are only too ready to jump on the bandwagon and squander our money needlessly in a double duplication of effort—namely, double facilities for the indigent (so-called) and double facilities for residency training.

In the third place, the most baltant of all the abuses of the present system is the lamentable fact that patients with non-service-connected disabilities get better care than those with service-connected disabilities. The reason for this, of course, is that those in the former class are mostly acute cases and therefore of more interest to the resident staff and for teaching purposes. Those of the latter class are chronic cases and of not so much interest, and, therefore, they get less attention. Thus we see that the entire object of the VA hospitals—the care of veterans disabled in war—has become thwarted by the empire building bureaucrats.

SOLUTION

What to do about it? We have been working on the problem in Maryland for several years. Our State Medical Society House of Delegates passed resolutions favoring admission only of patients with service-connected disabilities to VA hospitals. We wrote to other states and got them to support us. At the Dallas meeting of the AMA last December we succeeded in getting the AMA House of Delegates to pass a resolution requesting a congressional hearing in the matter. We believe if there was an adequate congressional hearing and the abuses of veterans' medical care were aired before the public, we could get corrective legislation. We cannot do it unless the public is aware. We can't do it either without the help of all the state medical societies and without all the doctors getting their congressmen to request corrective legislation.

There are people who say that it is impossible to get any legislation affecting the veteran. They say that the veterans are the politicians' pets. I might point out that labor is also the pet of the politicians. Yet in the last session of Congress, a fairly strong labor bill was forced through, really against the will of Congress, who had no appetite for anything but a weak bill, because of the grass-roots pressure. We can do the same thing with regard to the abuses in veterans' medical care, but it will take a lot of doing on the part of all of us.

The AMA resolution calling for a congressional hearing was referred to the AMA Council on Legislative Activities. I attended a meeting of the Council in January and a committee was appointed to start working right away paving the groundwork for a congressional hearing as soon as the presidential election is over.

RESULT OF LEGISLATION

Should legislation be passed denying all but service-connected cases admission to VA hospitals, the VA hospitals would die on the vine (except those for tuberculous and psychiatric patients). There would not be enough patients to keep them going. What, then, would happen to the service-connected cases? They could be very readily taken care of either in our many service hospitals or public health hospitals, or preferably at home on a home town care basis. This would save

us lots of money (about a billion a year) and it is high time that we were forcing our legislators to cut down on their extravagant spending.

ABOLISHMENT OF COMMITTEES

Should the desired legislation not be passed, then I think our Deans' Committees should be abolished. As pointed out before, the medical schools are hardly in a position to take the initiative. The initiative could very readily come either from the Council on Medical Education and Hospitals of the AMA, or from the Association of American Medical Colleges, or preferably from both. I feel sure that these bodies will not act unless pressure is put upon them. This could come from all of our state medical societies and the AMA. Our state medical societies could force the AMA into action just as we did in the congressional hearing matter. It is up to us. We are still (somewhat) masters of our fate. If the Deans' Committees were abolished, the residency training programs in VA hospitals would fall through and then there would be no further need for their taking patients with non-service-connected conditions. Then we would not have the managers of VA hospitals admitting healthy patients at random and keeping patients in the hospitals for weeks, instead of days, in order to keep their census up.

Before closing this article, I cannot resist the temptation to say something about the cause of all the phony things we see going on around us in this once sane country of ours.

With sops to veterans, sops to farmers, sops to labor, sops to every imaginable pressure group, our country is rapidly going on the rocks. I wonder if the American people are still tough enough to reverse the trend. Or are they becoming irretrievably soft—so soft that they no longer care anything for liberty, but only for the type of "security" furnished by a socialistic and paternalistic government. History has shown us that we cannot continue the present trend and survive. Those of us who are still tough must form the hard core for the regeneration of our once great nation.

SPENGLER AND INTERIOR DECAY

Spengler in his *The Decline of the West* has shown that all the great civilizations of the past have declined, not from outside sources, but from an interior decay. Socialism is one form or another has been responsible in each instance. The peoples of the various civilizations lost their tough fiber, and, instead of maintaining their sturdy independence and individualism, began to seek the ease and comfort that socialistic self-seeking politicians offered them. Thus fell Greece and Rome. Thus were nations and empires emasculated. Some of our present day Western nations have reduced themselves to the same pitiable state. Let us take heed from their example and not follow suit. ★★★

1014 St. Paul Street

THE LITERAL TRUTH

A man applying for some life insurance stopped at the question asking the cause of his father's death. Not caring to reveal the fact that his father had been hanged as a horse thief, he settled for this answer: "My father was taking part in a well attended public function when the platform gave way."—*Savings & Investment*

SPECIAL ARTICLE

Ephebiatricians: Bobby-Socks' Doctors

Journal MSMA
Special Feature

The Greeks, for perhaps the first time in recorded history, didn't have a word for it—teen-age medicine, that is. But then, perhaps they didn't have teen-agers which in turn probably accounts for the longevity of Greek strength. In the United States, teensters, Teamsters, and tongue fencing legistators demand national attention, in about that order, and sometimes it appears to be a tossup as to which group is undermining American traditions the fastest. One possible solution is ephebiatrics, the branch of medicine dedicated to helping adolescents find out what is wrong with them. Journal MSMA reviews the new specialty in this special feature.

THE AMERICAN TEEN-AGER sometimes feels he's occupying a medical no man's land. There comes a time in every boy's life when he feels a trifle silly waiting among the toys and play-pretties of childhood to see his old friend, the pediatrician, and yet seems out of place going to the folks' physician. Too old for colic and too young for stomach ulcers—that's the teen-ager's dilemma.

Adolescent medicine, the newest tuck in the furbelowed field of modern medicine, promises to remedy this adolescent beef. The Greeks, surprisingly enough, did not have a word for it, but this didn't daunt the early specialists in teen-age medicine. Remembering that Hebe, cupbearer of the gods, was the goddess of youth in Greek mythology, and that *ephebus* meant "upon entering youth," they came up with *ephebiatrics,* the study of adolescent medicine.

The new terminology was necessary because the terms "teen-ager" and "adolescent" had lost their original meaning for both patients and parents. Through newspaper usage "teen-ager" has become almost synonymous with "juvenile delinquent" and "adolescent" about equals "problem child with pimples." The descriptive, if synthetic, term ephebiatrics solved the semantical problem.

The new specialty was born in the early 1950's when Dr. J. Roswell Gallagher began to focus attention on the teensters through his adolescent unit in the Children's Hospital, Boston. Begun in 1952, the clinic in 1958 occupied four hospital floors and served 600 patients a month. The second teen-age clinic was established by Dr. Arthur Roth at the closed panel Kaiser Foundation Medical Center, Oakland, California, in 1953. Today at least nine major U. S. cities have outpatient clinics.

At present, few medical schools offer training in ephebiatrics as such. Two army doctors—Major Frederick C. Biehusen and Captain Leon M. Herbertson—have become champions of the "add ephebiatrics to pediatrics" campaign. The doctors ran across the medical outcast, the teen-ager, in their work at Letterman Army Base, San Francisco. Army regulations with their naive dedication to black and white divisions, separated the men from the boys at age 14, leaving numbers of teensters adrift in a medical vacuum until they felt mature enough to go to the general outpatient clinic or the various specialty clinics.

In March 1958, Letterman began an adolescent clinic, staffing it with the chief pediatric resident and one of the second year residents. Writing in the journal of the Student Medical Association (November 1959 *New Physician*), Biehusen and

Herbertson advocate making ephebiatrics a permanent feature of pediatric residency.

PREVENTIVE PRACTICE

"With the advent of antibiotics and modern therapeutic technics," they say, "the practice of acute pediatrics as the main mission of the pediatrician is giving way to more of a preventive practice. Well baby care, allergy, and the adolescent are examples of this changing scene. As the pediatrician finds the storehouse of acute disease diminishing, he looks elsewhere for professional satisfaction.

"More and more pediatricians are finding ephebiatrics a satisfying experience both professionally and personally," they continue. "The ephebiatric patient is a grateful and challenging patient. He will tolerate nothing less than our full attention."

Many teen-age troubles stem from insecurity in approaching adulthood. The girl who feels she's too tall, the boy who wants to be taller, the teen-ager with skin trouble all present potential psychological problems. Assurance that they are perfectly "normal" can nip a growing neurosis in the bud.

CASE REPORT

Tommy T. is 14. He comes from a good family of average means. His father is 5 ft., 6 in. His mother is 2 in. shorter. Tommy is under 5 ft. He became convinced he wasn't going to grow any more. The girls at school did not like him, he felt, and the boys picked on him, called him Shorty and Skinny.

As a result, Tommy became overaggressive. He began breaking windows, wearing a black leather jacket, and trying to pal around with an older gang. Soon he was setting fires. Finally he was arrested.

Tommy was referred to the adolescent unit of Children's Hospital in Boston. He scored well in intelligence tests, but in interviews it became obvious that he was obsessed by his feeling of smallness. He had a complete physical examination and was assured he was perfectly normal.

A doctor explained to Tommy that teen-agers grow at different rates. Tommy could expect to grow as tall as his father, perhaps even a little bit taller because of better nutrition. Some teen-agers, he was told, lag in growth and then suddenly spurt ahead. Some have grown as much as 6 in. in 6 mon.

X-rays were taken of Tommy's hands and wrists and compared with x-ray pictures of adult hands and wrists. Tommy could see that his bones had not yet grown completely.

Many of the teensters' problems are like Tommy's. They arise from situations that are meaningless to younger and older groups but are crucially important during teen time when conformity is compulsory and to be different is to be ostracized.

Dr. Arthur Roth tells of his 15-year-old patient who came to him in utter despair when her 12-year-old sister began to menstruate before she did. Her turn would come, Dr. Roth reassured her. A few weeks later she collared him at the clinic. "Dr. Roth," she yelled. "I've had it."

"That," says the pioneer ephebiatrician, "was as rewarding as delivering a new baby."

CLINIC DIFFERENCES

The teen-age clinic must differ in many ways from the average clinic. Dr. Biehusen says that adolescents should never be seen when patients of other age groups are in the office. Evenings and Saturday mornings are good times, he advises. Parents should be kept out of sight. If it is necessary to see them, schedule the appointments separately, he says.

Dr. Biehusen points out that the teen-age patient must feel that everything is on a man-to-man basis between him and his doctor, that the doctor is a confidant and not a bearer of tales to his parents. Thus does the patient come to understand and value the doctor-patient relationship at an early age.

According to Dr. Biehusen, the average visit to an ephebiatrician takes one-half hour or an hour. There are usually long treatment periods during which the doctor comes to know and understand the particular needs of his patients.

ADOLESCENT WORLD

Writes Biehusen, "The world of the adolescent is one of continued motion and competition. They live strenuously, work and play hard, compete against each other, and yet still have a very strong feeling of belonging with 'the gang.' A premium is placed upon physical appearance, clothes, complexion, and athletic and scholastic ability. The adolescent appreciates honesty and frankness and considers anything else a misuse of the trust they are willing to place in the physician."

(Turn to page 214)

92nd Annual Session

Mississippi State Medical Association
Jackson, May 10-12, 1960

MISSISSIPPI'S CAPITAL CITY, Jackson, will welcome the 92nd Annual Session of the association which, with concurrent medical meetings, will offer five days of convention activity to physicians, Auxiliary members, families, and guests. Headquarters hotels are the Heidelberg and King Edward. Preparations have been made for an attendance of more than 1,000 during the meeting complex.

The Scientific Assembly, House of Delegates, technical and scientific exhibits, and secretary's office will be located at the Hotel Heidelberg. The King Edward will be host to the Woman's Auxiliary to the Mississippi State Medical Association, major social functions, and most specialty society meetings. Other participating hotels are the Robert E. Lee and the Walthall. Jackson's new array of conveniently situated motels will house many members and guests.

About 75 speakers will appear before two dozen separate meetings including the six formal scientific sections, the House of Delegates, Woman's Auxiliary, medical alumni and fraternity meetings, special luncheon and dinner occasions, and specialty society conclaves. Distinguished guests will include Dr. E. Vincent Askey, Los Angeles, president-elect of the American Medical Association, and Mrs. Frank Gastineau, Indianapolis, president of the Woman's Auxiliary to AMA.

On the lighter side, the annual association golf tournament will be conducted at the Jackson Country Club on May 10. Wednesday evening, the social highlight will be the annual association banquet, open to members and guests. Mississippi, Tennessee, and Tulane medical alumni groups will sponsor dinner occasions as will many specialty societies.

Many arrivals are set for Sunday, May 8, since most specialty groups have programmed Monday meetings. Official beginning of the annual session will be the House of Delegates on Tuesday with scientific work opening officially on the same day. Wednesday schedules include reference committee meetings and hearings, scientific section programs, and entertainment events. Thursday is the concluding day with major scientific activity and the final meeting of the House of Delegates.

Early hotel reservations are advised and Mr. O. F. McDade, the Heidelberg, is serving as housing coordinator. Association members may communicate directly with Mr. McDade or the hotel of individual choice.

OFFICIAL CALL

To all members of the Mississippi State Medical Association:

The 92nd Annual Session of the Mississippi State Medical Association is called to meet at Jackson, Mississippi, on Tuesday, May 10, 1960, pursuant to Article V of the constitution. The House of Delegates will be convened at 9 o'clock a.m. at the Hotel Heidelberg.

The Scientific Assembly, consisting of the Sections on Eye, Ear, Nose, and Throat, Medicine, Obstetrics and Gynecology, Pediatrics, Preventive Medicine, and Surgery, will meet during the period May 10-12, 1960.

No member or guest will be permitted to participate in any aspect of the annual session until regularly registered.

STANLEY A. HILL
PRESIDENT
WILLIAM E. LOTTERHOS
SECRETARY-TREASURER

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Stanley A. Hill, M.D.
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THE CENTRAL OFFICE: Mr. Rowland B. Kennedy
Executive Secretary

PAST PRESIDENTS

1914-1915 . . . . . J. S. Ullman, M.D., Natchez
1931-1932 . . . . . J. C. Culley, M.D., Oxford
1933-1934 . . . . . John W. D. Dicks, M.D., Brooklyn, N. Y.
1934-1935 . . . . . E. C. Parker, Sr., M.D., Gulfport
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1936-1937 . . . . . Harvey F. Garrison, M.D., Jackson
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1942-1943 . . . . . H. Lowry Rush, Sr., M.D., Meridian
1943-1944 . . . . . E. LeRoy Wilkins, M.D., Clarksdale
1944-1945 . . . . . B. L. Crawford, M.D., Tylertown
1946-1947 . . . . . J. K. Avent, Sr., M.D., Grenada
1948-1949 . . . . . R. B. Caldwell, M.D., Baldwyn
1949-1950 . . . . . B. B. O'Mara, M.D., Biloxi
1950-1951 . . . . . B. S. Guyton, M.D., Oxford
1951-1952 . . . . . James Grant Thompson, M.D., Jackson
1952-1953 . . . . . Lamar Arrington, M.D., Meridian
1953-1954 . . . . . M. Q. Ewing, M.D., Amory
1955-1956 . . . . . S. Lamar Bailey, M.D., Kosciusko
1956-1957 . . . . . H. C. Ricks, M.D., Jackson
1957-1958 . . . . . Howard A. Nelson, M.D., Greenwood
1958-1959 . . . . . Guy T. Vise, M.D., Meridian

OPEN SESSION—HOUSE OF DELEGATES

All members, guests, and Auxiliary members are invited to attend the open session of the House of Delegates beginning at about 11:00 a.m., Tuesday, May 10, 1960, during which a special order of business will be observed. This includes:

The Distinguished Service Oration

B. B. O'Mara, M.D., Biloxi, Vice Speaker and Past President

Address of the President

Stanley A. Hill, M.D., Corinth, President

Special Address

E. Vincent Askey, M.D., Los Angeles, President-elect, American Medical Association

ACTIVITIES CALENDAR

REGISTRATION

General registration for the House of Delegates and the Scientific Assembly will be located in the Victory Lounge, Hotel Heidelberg. No person will be admitted to any activity of the Annual Session without first registering. The Secretary's Office will be located in Rooms 230-232, and the Press Room in Parlor B, Hotel Heidelberg. Hours of registration are: May 9, 1:00 to 5:00 p.m.; May 10, 8:00 a.m. to 5:00 p.m.; May 11, 8:30 a.m. to 5:00 p.m.; and May 12, 8:30 a.m. to 1:30 p.m.

MONDAY, MAY 9, 1960

9:00 a.m.	Miss. Association of Pathologists, King Edward, Walnut Room
10:00 a.m.	Miss. Society of Internal Medicine, University Medical Center
12:00 Noon	Miss. Chapter, American Academy of Pediatrics, Luncheon, Heidelberg, Rose Room
12:30 p.m.	Miss. Orthopedic Society, Luncheon, Crechale's
2:00 p.m.	Miss. Chapter, American Academy of Pediatrics, Heidelberg, Victory Foyer
2:00 p.m.	Miss. Urological Association, King Edward, Creole Room
4:30 p.m.	Woman's Auxiliary to MSMA, Preconvention Executive Board, King Edward, Coronet Ballroom
5:30 p.m.	Nu Sigma Nu, Heidelberg, Capital Room
6:00 p.m.	Miss. Association of Pathologists, Fellowship Hour and Banquet, King Edward, Bamboo Room
6:30 p.m.	University of Tennessee Alumni, Fellowship Hour and Banquet, Heidelberg, Rose Room
7:00 p.m.	Miss. Chapter, American Academy of Pediatrics, Banquet, King Edward, Patio Club
7:00 p.m.	Miss. Society of Anesthesiologists, Banquet, Heidelberg, Parlor A
7:00 p.m.	Miss. Urological Association, Fellowship Hour and Banquet, King Edward, Gold Room
7:00 p.m.	Tulane University Alumni, Fellowship Hour and Banquet, King Edward, Crown Ballroom

TUESDAY, MAY 10, 1960

7:30 a.m.	Woman's Auxiliary to MSMA, Continental Breakfast, All Auxiliary Members, King Edward, Coronet Ballroom
9:00 a.m.	House of Delegates, Heidelberg, Rose Room
9:00 a.m.	Woman's Auxiliary to MSMA, General Session, King Edward, Coronet Ballroom
11:00 a.m.	Miss. Ob-Gyn Society, Fellowship Hour and Luncheon, Heidelberg, Roof
12:00 Noon	Fifty Year Club, Luncheon, University Medical Center
12:00 Noon	American College of Surgeons, Miss. Section on Trauma, Luncheon, King Edward, Walnut Room

12:30 p.m. Woman's Auxiliary to MSMA, Luncheon, King Edward, Crown Ballroom
1:30 p.m. American College of Surgeons, Miss. Section on Trauma, King Edward, Bamboo Room
2:00 p.m. Section on Pediatrics, Heidelberg, Victory Foyer
2:00 p.m. Section on Obstetrics and Gynecology, Heidelberg, Rose Room
2:30 p.m. Woman's Auxiliary to MSMA, Workshop, King Edward, Coronet Ballroom
3:00 p.m. Reference Committee on Reports of Officers and Board of Trustees, Heidelberg, Capital Room
3:30 p.m. Woman's Auxiliary to MSMA, Postconvention Executive Board, King Edward, Coronet Ballroom
5:00 p.m. University of Mississippi Alumni, Heidelberg, Rose Room
6:30 p.m. Phi Chi Alumni, Heidelberg, Capital Room
6:30 p.m. University of Mississippi Alumni, Fellowship Hour and Banquet, Heidelberg, Roof

WEDNESDAY, MAY 11, 1960

7:30 a.m. Past Presidents' Breakfast, MSMA, Heidelberg, Capital Room
8:00 a.m. Past Presidents' Breakfast, Woman's Auxiliary to MSMA, King Edward, Walnut Room
8:30 a.m. Miss. EENT Association, Heidelberg, Victory Foyer
9:00 a.m. Section on Medicine, Heidelberg, Rose Room
10:00 a.m. Reference Committee on Medical Practices, Heidelberg, Roof
12:00 Noon Section on EENT, Luncheon, Heidelberg, Capital
12:30 p.m. Flying Physicians Association, Luncheon, King Edward, Gold Room
12:30 p.m. Miss. Academy of General Practice, Luncheon, King Edward, Bamboo Room
2:00 p.m. Section on Preventive Medicine, Heidelberg, Victory Foyer
2:00 p.m. Section on EENT, Heidelberg, Rose Room
2:00 p.m. Reference Committee on Miscellaneous Business, Heidelberg, Roof
3:00 p.m. MSMA Nominating Committee, Heidelberg, Parlor A
6:30 p.m. MSMA Fellowship Hour, All Members and Guests, King Edward, Walnut, Foyer, and Bamboo Rooms
7:30 p.m. Annual Association Banquet-Dance, King Edward, Crown-Coronet Ballroom

THURSDAY, MAY 12, 1960

7:30 a.m. Southern Medical Association, Breakfast, Heidelberg, Capital Room (By Invitation)
9:00 a.m. Section on Surgery, Heidelberg, Rose Room
1:30 p.m. House of Delegates, Heidelberg, Rose Room

EXECUTIVE BUSINESS

HOUSE OF DELEGATES

Tuesday, May 10, 1960, 9:00 a.m.

The Hotel Heidelberg, Rose Room

Lawrence W. Long, M.D., Jackson, Speaker

B. B. O'Mara, M.D., Biloxi, Vice Speaker

DR. LONG

DR. O'MARA

MEETINGS OF THE HOUSE

The meeting will be opened by the President and the Speaker, in presiding over the House, will announce the order of business. The adjourned meeting will be opened at 1:30 p.m., Thursday, May 12, 1960. All meetings of the House will be held at the Hotel Heidelberg.

REFERENCE COMMITTEES

Reports, resolutions, and other business coming before the House will ordinarily be referred to a reference committee by the Speaker for hearing and recommendation. Any member of the association may appear before a reference committee on any matter being considered. Reference committees are scheduled to meet at the Hotel Heidelberg at the times and places shown.

Reference Committee on Reports of Officers and Board of Trustees
Hotel Heidelberg, Capital Room, Tuesday, May 10, 3:00 p.m.

Reference Committee on Medical Practices
Hotel Heidelberg, The Roof, Wednesday, May 11, 10:00 a.m.

Reference Committee on Miscellaneous Business
Hotel Heidelberg, The Roof, Wednesday, May 11, 2:00 p.m.

THE SCIENTIFIC ASSEMBLY

THE TECHNICAL EXHIBIT

Victory Room

The Hotel Heidelberg

THE SCIENTIFIC EXHIBIT

Silver Room

The Hotel Heidelberg

SCIENTIFIC SECTIONS

Eye, Ear, Nose and Throat

Medicine

Obstetrics and Gynecology

Pediatrics

Preventive Medicine

Surgery

The Hotel Heidelberg

CONDUCT OF THE SCIENTIFIC ASSEMBLY

The order of exercise, papers, and discussions as set forth in the official program shall be followed until completion. When the program of a section is not completed in the time allotted, it shall not be permitted to continue into that assigned to another section. No paper or address shall occupy more than twenty minutes, except those of the President, Orator, and guests. In formal discussion, no one shall speak more than five minutes, and in informal discussion, no one shall speak more than three minutes and not more than one time. All papers read before the association shall become its property. Each paper must be read by its author and deposited with the Secretary (or Chairman of the Section) when read.

THE TECHNICAL EXHIBITS

The Mississippi State Medical Association presents with pride the 1960 Technical Exhibit. More than fifty ethical, established firms engaged in the manufacture and distribution of pharmaceuticals, supplies, and equipment will present exhibits. Visit each exhibit often and discuss products and services with the Professional Service Representatives. Since the association conducts its scientific activity by section meetings, continuous viewing of exhibits during off-section schedules is possible and specific reservations of time are unnecessary for physicians to visit the Technical Exhibits. Only registered members and guests are admitted. The Technical Exhibit is located in the Victory Room, Hotel Heidelberg.

EXHIBITOR	BOOTH
Abbott Laboratories, North Chicago, Ill.	39
A. S. Aloe Company of Louisiana, Inc., New Orleans, La.	11 & 12
Baxter Laboratories, Inc., Morton Grove, Ill.	41
The Borden Company, New York, N. Y.	18
Carrtone Laboratories, Inc., Metairie, La.	53
Ciba Pharmaceutical Products, Inc., Summit, N. J.	37
Coca-Cola Company, Atlanta, Ga.	56
Doho Chemical Corp., New York, N. Y.	26
Eaton Laboratories, Norwich, N. Y.	55
Encyclopedia Britannica, Philadelphia, Pa.	54
Geigy Pharmaceuticals, Yonkers, N. Y.	13
Holland-Rantos Company, Inc., New York, N. Y.	42
Kay Surgical, Inc., Jackson, Miss.	47
King Pharmaceutical Company, Inc., Montgomery, Ala.	50
Fred Kremp Company, Jackson, Miss.	15
Lanier Company, Atlanta, Ga.	22
Lederle Laboratories Division, American Cyanamid Company, Pearl River, N. Y.	9
Eli Lilly and Company, Indianapolis, Ind.	38
J. A. Majors Company, New Orleans, La.	29
Maltbie Laboratories Division, Wallace & Tiernan, Inc., Belleville, N. J.	21
S. E. Massengill Company, Bristol, Tenn.	49

McNees Medical Supply Company, Jackson, Miss. . . . . 1 & 2
McNeil Laboratories, Inc., Philadelphia, Pa. 8
Mead Johnson and Company, Evansville, Ind. 33
Medco Products Company, Tulsa, Okla. 28
Merck Sharp & Dohme, Philadelphia, Pa. 31
Mississippi Hospital & Medical Service, Inc., Jackson, Miss. 20
Mutual Benefit Life Insurance Company, Brookhaven, Miss. . . . 52
National Cash Register Company, Jackson, Miss. 35
Parke, Davis & Company, Detroit, Mich. 45
Pepsi-Cola Company, Atlanta, Ga. 6
Pfizer Laboratories, Brooklyn, N. Y. 17
Picker X-Ray Corporation, Washington, D. C. 32
William P. Poythress & Company, Inc., Richmond, Va. 3
Rightway Travel Agency, Jackson, Miss. 40
A. H. Robins Company, Inc., Richmond, Va. 27
William H. Rorer, Inc., Philadelphia, Pa. 5
Sandoz Pharmaceuticals, Hanover, N. J. 30
Savage Laboratories, Inc., Houston, Texas 46
Schering Corporation, Bloomfield, N. J. 48
G. D. Searle and Company, Chicago, Ill. 10
Smith Kline & French Laboratories, Philadelphia, Pa. 36
Southern Surgical Supply Company, New Orleans, La. 7
Southwest Drug Company, Jackson, Miss. 4
E. R. Squibb & Sons, New York, N. Y. 51
Stuart Company, Pasadena, Calif. 23
U. S. Vitamin and Pharmaceutical Corp., New York, N. Y. 14
Upjohn Company, Kalamazoo, Mich. 24
Winthrop Laboratories, New York, N. Y. 19

REGISTRATION FOR EXHIBIT PRIZES

Visit the Technical Exhibits often and qualify for the drawing of attractive prizes. Secure your card showing the names of the exhibitors and obtain the necessary initials as you visit each booth. Deposit cards at Registration not later than 5:00 p.m., Wednesday, May 11. Exhibitors will initial cards only when in the possession of the physician whose name appears thereon and cards are not transferrable.

THE SCIENTIFIC EXHIBIT

Physicians, foundations, and organizations will present the Scientific Exhibit. Physician-members of the Mississippi State Medical Association are eligible for the Annual Gold Medal Award for excellence in scientific work. Guest exhibitors, foundations, and organizations do not participate for the medal but may receive recognition for outstanding presentations. The Scientific Exhibit is located in the Silver Room, Hotel Heidelberg.

EXHIBITORS

"Unusual Causes of Intestinal Obstruction"
William O. Barnett, M.D., Jackson, Booth 4
"Nerve Injuries of the Hand"
J. T. Davis, M.D., Corinth, Booth 7
"Mediolateral Episiotomy"
W. B. Inmon, M.D., and Winfred Wiser, M.D., Jackson, Booth 6
"Lung Pathology in Plastic"
J. L. Wofford, M.D., and H. K. Stauss, M.D., Jackson, Booth 3
Association of American Physicians and Surgeons, Booth 1
"Examination of the Colon and Rectum"
American Cancer Society, Mississippi Division, Jackson, Booth 5
Flying Physicians Association Disaster Plan, Arcade
Hinds County Association for Mental Health, Booth 8
Jackson Council on Alcoholism, Booth 2
Mississippi Dietetic Association, Booth 9

Welcome to Mississippi's capital city and the 92nd Annual Session of your Mississippi State Medical Association. Stimulating scientific activity, recreation, entertainment, and fellowship are scheduled to afford you a professionally profitable and personally enjoyable session. We who share in the responsibilities of planning and conducting the Annual Session urge all in attendance to call on us for any service we may render.

Dr. Lotterhos

W. E. Lotterhos, M.D.
General Chairman
J. G. Thompson, M.D.
General Co-Chairman

SECTION ON OBSTETRICS AND GYNECOLOGY

DR. O'NEAL

Tuesday, May 10, 1960
Rose Room
Beginning at 2:00 p.m.

K. Ramsay O'Neal, Hattiesburg
Chairman

DIAGNOSIS AND TREATMENT OF ABRUPTIO PLACENTA
Lawrence Hester, Charleston
DIABETES AND PREGNANCY
T. K. Dampeer, Jr., New Orleans
CHORIO-ADENOMA DESTRUENS—CASE REPORT
Richard A. Street, Jr., Vicksburg
Discussion: Claude G. Callender, Jackson
INDICATIONS AND TECHNIQUE FOR INTRA-ARTERIAL TRANSFUSIONS IN GYNECOLOGY
J. Hurd Gaddy, Gulfport
Discussion: John R. Bise, III, Jackson
ELECTION OF 1961 SECTION OFFICERS
The Chairman Presiding (Only registered members of the section may vote)

SECTION ON PEDIATRICS

DR. ROBINSON

Tuesday, May 10, 1960
Victory Foyer
Beginning at 2:00 p.m.

Jo Newell Robinson, Columbus
Chairman

THE JAUNDICED BABY
Arthur E. McElfresh, Philadelphia
ETIOLOGY AND MANAGEMENT OF HYPERTENSION IN CHILDREN
C. William Daeschner, Galveston
CONGENITAL ANOMALIES OF THE GU TRACT
Joel L. Alvis, Jackson
SURGICAL RESECTION FOR TUBERCULOSIS IN CHILDREN
Jesse L. Wofford, Jackson
ELECTION OF 1961 SECTION OFFICERS
The Chairman Presiding (Only registered members of the section may vote)

SECTION ON MEDICINE

DR. THOMPSON

Wednesday, May 11, 1960
Rose Room
Beginning at 9:00 a.m.

James Grant Thompson, Jackson
Chairman

GRISEOFULVIN—COMMENTS WITH CASE REPORTS
James Grant Thompson, Jackson

PRESENT STATUS OF THE MANAGEMENT OF ATHEROSCLEROSIS
Thomas M. Blake, Jackson

MISSISSIPPI'S FUTURE CONTRIBUTIONS TO MEDICAL EDUCATION
Guy A. Caldwell, New Orleans

DIFFERENTIAL DIAGNOSIS OF LEUKEMOID REACTIONS AND LEUKEMIA
Warren N. A. Bell, Jackson

PIGMENTED NEVI AND MALIGNANT MELANOMA OF THE SKIN
Robert N. Buchanan, Nashville

ELECTION OF 1961 SECTION OFFICERS
The Chairman Presiding (Only registered members of the section may vote)

SECTION ON EYE, EAR, NOSE AND THROAT

DR. HASSELTINE

Wednesday, May 11, 1960
Rose Room
Beginning at 2:00 p.m.

Lee L. Hasseltine, Corinth
Chairman

CORNEAL DYSTROPHIES
John J. White, Jackson

DIAGNOSIS OF HEADACHES BY THERAPEUTIC TESTS
C. Hal Cleveland, Gulfport

FUNGI AS RELATED TO OPHTHALMOLOGY
Eugene Morrison, Oxford

THE VERSATILE ANTROSTOMY
Daniel F. Fisher, Memphis

MANAGEMENT OF EYE INJURIES
George M. Haik, New Orleans

ELECTION OF 1961 SECTION OFFICERS
The Chairman Presiding (Only registered members of the section may vote)

SECTION ON PREVENTIVE MEDICINE

DR. WIGGINS

Wednesday, May 11, 1960

Victory Foyer

Beginning at 2:00 p.m.

Joe W. Wiggins, Vicksburg
Chairman

IMMUNOLOGICAL ASPECTS OF TUBERCULOSIS CONTROL
Durward L. Blakey, Jackson
THE PERSONAL PHYSICIAN-PUBLIC HEALTH TEAM IN VENEREAL DISEASE CONTROL
Hubert T. Goodman, Jr., Jackson
CURRENT STATUS OF STAPHYLOCOCCAL INFECTIONS
Fred Allison, Jr., Jackson
PRESENT OUTLOOK IN TUBERCULOSIS
Clyde A. Watkins, Sanatorium
ELECTION OF 1961 SECTION OFFICERS
The Chairman Presiding (Only registered members of the section may vote)

SECTION ON SURGERY

DR. TWENTE

Thursday, May 12, 1960

Rose Room

Beginning at 9:00 a.m.

George E. Twente, Jackson
Chairman

COSMETIC SURGERY
James H. Hendrix, Jr., Jackson
OOPHORECTOMY IN CARCINOMA OF THE BREAST
William L. Thornton, Meridian
COMPLICATIONS OF DIVERTICULITIS OF THE COLON
Jack V. King, Jackson
Dewitt T. Brock, Jr., Jackson
TUMORS OF THE PANCREAS
Robert J. Coffey, Washington
SURGERY OF DUODENAL ULCER—PANEL
Robert J. Coffey, Washington, Moderator
William L. Thornton, Meridian
George E. Twente, Jackson
Jack V. King, Jackson
ELECTION OF 1961 SECTION OFFICERS
The Chairman Presiding (Only registered members of the section may vote)

ESSAYISTS

DR. ASKEY

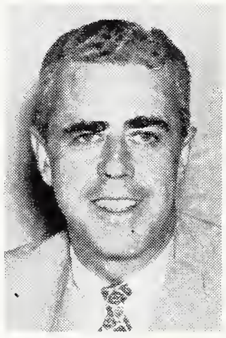
EDWIN VINCENT ASKEY, M.D., Los Angeles, California. President-elect, American Medical Association. Medical Degree: University of Pennsylvania School of Medicine, 1921. Diplomate, American Board of Surgery.

DR. BUCHANAN

ROBERT N. BUCHANAN, JR., M.D., Nashville, Tennessee. Professor, Department of Dermatology, Vanderbilt University School of Medicine. Medical Degree: Vanderbilt University School of Medicine, 1934. Diplomate, American Board of Dermatology and Syphilology.

DR. CALDWELL

GUY ALVIN CALDWELL, M.D., New Orleans, Louisiana. Professor Emeritus, Department of Orthopedic Surgery, Tulane University School of Medicine. Medical Degree: Columbia University College of Physicians and Surgeons, 1914. Diplomate, American Board of Orthopedic Surgery.



DR. COFFEY

ROBERT JAMES COFFEY, M.D., Washington, D. C. Professor, Department of Surgery, Georgetown University School of Medicine. Medical Degree: Georgetown University School of Medicine, 1932; Ph.D., Surgery, Mayo Foundation, 1938; M.S., Medicine, Mayo Foundation, 1938. Diplomate, American Board of Surgery.

DR. DAESCHNER

CHARLES WILLIAM DAESCHNER, JR., M.D., Galveston, Texas. Professor and Chairman, Department of Pediatrics, University of Texas School of Medicine. Medical Degree: University of Texas Medical Branch, 1945. Diplomate, American Board of Pediatrics.

Theodore K. Dampeer, Jr., M.D., New Orleans, Louisiana. Medical Degree: Tulane University School of Medicine, 1951.

Dr. Dampeer

Dr. Fisher

Daniel Franklin Fisher, M.D., Memphis, Tennessee. Medical Degree: University of Tennessee College of Medicine, 1939. Diplomate, American Board of Ophthalmology.

George Michel Haik, M.D., New Orleans, Louisiana. Professor and Head, Department of Ophthalmology, Louisiana State University School of Medicine. Medical Degree: Tulane University School of Medicine, 1934. Diplomate, American Board of Ophthalmology.

Dr. Haik

Dr. Hester

Lawrence L. Hester, Jr., M.D., Charleston, South Carolina. Chairman, Department of Obstetrics and Gynecology, Medical College of South Carolina. Medical Degree: Medical College of South Carolina, 1944. Diplomate, American Board of Obstetrics and Gynecology.

Arthur Edward McElfresh, M.D., Philadelphia, Pennsylvania. Assistant Professor, Department of Pediatrics, Temple University School of Medicine. Medical Degree: Cornell University Medical College, 1947. Diplomate, American Board of Pediatrics.

Dr. McElfresh

WOMAN'S AUXILIARY
to the
MISSISSIPPI STATE MEDICAL ASSOCIATION
37th Annual Session
Hotel King Edward
May 9-11, 1960

MRS. THOMPSON

MRS. REID

OFFICERS

MRS. JAMES T. THOMPSON
Moss Point
PRESIDENT

MRS. LEE R. REID
Jackson
PRESIDENT-ELECT

CHAIRMEN

MRS. FRED D. HOLLOWELL
Jackson
General Chairman

MRS. FRANK DONALDSON
Jackson

MRS. GEORGE D. PURVIS
Jackson
Publicity

MRS. JAMES M. PACKER
Jackson
Registration

MRS. ONNIE P. MYERS
Jackson
Luncheon

MRS. DAVID J. VAN LANDINGHAM
Jackson
Decorations

MRS. W. JOHNSON WITT
Jackson
Entertainment

PROGRAM

Monday, May 9

10:00-12:00 a.m.	Registration, Mrs. James Packer, Chairman
3:00- 6:00 p.m.	Hotel Heidelberg Lobby, King Edward Lobby
4:30 p.m.	Preconvention Executive Board Meeting King Edward, Coronet Ballroom

AUXILIARY

Tuesday, May 10

7:30- 8:30 a.m. Mrs. James T. Thompson, Continental Breakfast for Auxiliary Members
King Edward, Coronet Ballroom

8:00 a.m. Registration
Hotel Heidelberg Lobby, King Edward Lobby

8:30 a.m. General Session, King Edward, Coronet Ballroom
Mrs. James T. Thompson, Presiding
Invocation
Mrs. M. M. Snelling, Gulfport
Membership Pledge
Mrs. Mayo Flynt, Meridian
Address of Welcome
Mrs. Lloyd E. Deddens, President
Central Medical Auxiliary
Response
Mrs. William Crowson, Clarksdale
Presentation of Convention Chairman
Mrs. Fred Hollowell, Jackson
Introductions
Greetings from Dr. Stanley A. Hill, President, MSMA
Greetings from Dr. G. Swink Hicks, President-Elect, MSMA
Greetings from Dr. A. Street, Chairman, Auxiliary Advisory Committee
Report from AMA Auxiliary
Mrs. Stanley A. Hill, Corinth
Report from SMA Auxiliary
Mrs. T. A. Baines, Jackson
Greetings from Mrs. Kalford W. Howard, President-Elect, SMA Auxiliary
Memorial Service
Mrs. L. O. Stewart, Pascagoula
Roll Call
Minutes
Recommendations of the Board
Other Business
Unit Presidents' Reports: Outstanding Work
President's Report
Mrs. James T. Thompson, Moss Point

AUXILIARY

Credentials and Registration
Mrs. Fred D. Hollowell, Jackson
Report of Nominating Committee
Mrs. Mayo Flynt, Meridian
Election of Officers
Election of Delegates to AMA
Courtesy Resolutions
Mrs. A. E. Brown, Columbus
Adjournment

12:30 p.m. Luncheon, King Edward, Crown Ballroom
Honoring Mrs. Frank Gastineau, President, Woman's Auxiliary to the AMA
Mrs. James T. Thompson, Presiding
Invocation
Mrs. W. H. Anderson, Booneville
Presentations of AMEF Certificates of Achievements
Mrs. A. C. Bryan, Jr., Meridian
Introductions
Address
Mrs. Frank Gastineau
Installation of Officers
Mrs. Frank Gastineau
Presentation of Gavel and Pin
Response
Mrs. Lee R. Reid, Jackson
Presentation of Past President's Pin
Mrs. Joseph B. Rogers, Oxford
Announcements
Adjournment

2:30 p.m. Presidents and Presidents-Elect Workshop
King Edward, Coronet Ballroom

3:30 p.m. Postconvention Executive Board Meeting
Mrs. Lee R. Reid, Jackson
King Edward, Coronet Ballroom

Wednesday, May 11

8:00 a.m. Past Presidents' Breakfast
Mrs. Mayo Flynt, Meridian, Presiding
King Edward, Walnut Room

10:30 a.m. Coffee and Fashion Show
Kennington's

OTHER MEETINGS

MISSISSIPPI ASSOCIATION OF PATHOLOGISTS

King Edward Hotel
Monday, May 9, 1960

THOMAS F. PUCKETT, Hattiesburg, *President*
KENNETH M. HEARD, Jackson, *Secretary*

9:00 a.m. Scientific Program, Walnut Room
"Seminar on Morphology of Blood Cells"
L. W. Diggs, Memphis
11:30 a.m. Luncheon Recess
1:00 p.m. "Seminar on Morphology of Blood Cells"
L. W. Diggs, Memphis
3:45 p.m. Business Session
6:00 p.m. Fellowship Hour, Bamboo Room
7:00 p.m. Banquet, Bamboo Room

MISSISSIPPI CHAPTER, AMERICAN ACADEMY OF PEDIATRICS

Hotel Heidelberg
Monday, May 9, 1960

GUY C. JARRATT, Vicksburg, *Chairman*
L. L. MCDOUGAL, Tupelo, *Vice Chairman*
HOWARD H. NICHOLS, Jackson, *Secretary*

12:00 Noon Fellowship Hour and Luncheon, Rose Room
2:00 p.m. Scientific Session, Victory Foyer
"The Place of Renal Biopsy in the Evaluation of Patients With Suspected Renal Disease"
C. William Daeschner, Galveston
"Coagulation During the Newborn Period"
Arthur E. McElfresh, Philadelphia
"Congestive Heart Failure in Infants"
David Watson, Jackson
"Differential Diagnosis of Doubtful Sex"
J. Darrell Smith, Jackson
Business Session
6:00 p.m. Fellowship Hour and Banquet, Patio Club, King Edward Hotel
12:00 Noon Luncheon, Parlor A, Hotel Heidelberg

OTHER MEETINGS

MISSISSIPPI SOCIETY OF INTERNAL MEDICINE

University Medical Center
Monday, May 9, 1960

D. J. Van Landingham, Jackson, *President*
John G. Archer, Greenville, *President-Elect*
W. H. Boggan, Jackson, *Secretary*

10:00 a.m. "Observation on Recognition and Management of Bacterial Endocarditis"
John F. Jackson, Jackson
Fred Allison, Jr., Jackson
"Experience at the University Hospital With Pituitary Tumors"
Herbert G. Langford, Jackson
Business Session, Members Only

MISSISSIPPI UROLOGICAL ASSOCIATION

King Edward Hotel
Monday, May 9, 1960

Frank L. Ramsay, Laurel, *President*
Julian Wiener, Jackson, *Secretary*

2:00 p.m. Business Session, Creole Room
2:40 p.m. Guest Speaker
Lee Sharpe, Pensacola
3:40 p.m. Case Presentations
4:15 p.m. Pyleogram Hour
7:00 p.m. Fellowship Hour and Banquet, Gold Room

SYMPOSIUM ON THE DIAGNOSIS AND TREATMENT OF THE ACUTELY INJURED PATIENT

American College of Surgeons
Mississippi Section on Trauma

King Edward Hotel
Tuesday, May 10, 1960

12:00 Noon Luncheon, Walnut Room
1:30 p.m. Business Session, Bamboo Room
2:00 p.m. "Chest Injuries"
Watts Webb, Jackson

OTHER MEETINGS

2:10 p.m. "Eye Injuries"
Samuel B. Johnson, Jackson
2:20 p.m. "Facial Injuries"
James H. Hendrix, Jr., Jackson
H. C. Etheridge, Jackson
2:30 p.m. "Electrolyte and Blood Volume Injuries"
Leo J. Scanlon, Jr., Jackson
2:40 p.m. "Head Injuries"
Orlando J. Andy, Jackson
2:50 p.m. Questions From the Audience
3:20 p.m. Intermission
3:30 p.m. "Fractures and Dislocations (X-ray Diagnosis)"
Fred J. Hamernik, Vicksburg
3:40 p.m. "Fractures (Treatment)"
George D. Purvis, Jackson
3:50 p.m. "Genitourinary Injuries"
Temple Ainsworth, Jackson
4:00 p.m. "Abdominal Injuries"
Harold Conn, Jackson
4:10 p.m. Questions From the Audience

MISSISSIPPI EYE, EAR, NOSE AND THROAT ASSOCIATION

Hotel Heidelberg
Wednesday, May 11, 1960

HILLRIE K. ROUSE, Gulfport, *President*
EARL W. GREEN, Hattiesburg, *Vice President*
SAMUEL B. JOHNSON, Jackson, *Secretary-Treasurer*

8:30 a.m. Registration, Victory Foyer
9:00 a.m. Scientific Session, Victory Foyer
9:05 a.m. "Economic Ills of Mississippi: Diagnosis and Management"
Mr. M. B. Swayze, Jackson
Business Session
12:00 Noon Section on EENT Luncheon, Capital Room

OTHER MEETINGS

FIFTY YEAR CLUB

Members of the Fifty Year Club will be honored during a luncheon on Tuesday, May 10, at 12:00 noon, at the University Medical Center.

FLYING PHYSICIANS ASSOCIATION

Mississippi members of the Flying Physicians Association and non-member physicians interested in private flying will attend a luncheon on Wednesday, May 11, at 12:30 p.m., at the King Edward Hotel, Gold Room, Dr. A. C. Bryan, Jr., Meridian, is President.

GOLF TOURNAMENT

The Annual MSMA Golf Tournament will be held on Tuesday, May 10, at the Jackson Country Club, Old Clinton Boulevard (west). Dr. D. T. Brock, Jackson, tournament chairman, will furnish details to interested members.

MISSISSIPPI ACADEMY OF GENERAL PRACTICE

The Mississippi Chapter, American Academy of General Practice, will sponsor a luncheon meeting at the King Edward Hotel, Bamboo Room, at 12:30 p.m., on Wednesday, May 11. Dr. J. P. Culpepper, Jr., Hattiesburg, is chairman.

MISSISSIPPI ALUMNI

University of Mississippi medical alumni will meet on Tuesday, May 10, in the Hotel Heidelberg, Rose Room, at 5:00 p.m., for a business session. A fellowship hour and banquet will be enjoyed at 6:30 p.m. on the Roof. Mr. William S. Griffin, alumni secretary, will furnish further information. Tickets may be purchased near registration.

MISSISSIPPI OB-GYN SOCIETY

Members of the Mississippi Ob-Gyn Society will meet at the Hotel Heidelberg, the Roof, at 11:00 a.m., on Tuesday, May 10, for a social hour, luncheon and business session. Dr. Carl E. Lewis, Jackson, is President.

MISSISSIPPI ORTHOPEDIC SOCIETY

Members and invited guests of the Mississippi Orthopedic Society will meet at Crechale's at 12:30 p.m., Monday, May 9, for luncheon and a scientific session. Officers are: Dr. George D. Purvis, Jackson, President; Dr. W. C. Warner, Jackson, Vice President; and Dr. John G. Caden, Jackson, Secretary.

OTHER MEETINGS

MISSISSIPPI SOCIETY OF ANESTHESIOLOGISTS

Members of the Mississippi Society of Anesthesiologists will enjoy a dinner meeting at the Hotel Heidelberg, Parlor A, at 7:00 p.m., on Monday, May 9. Officers are: Dr. Robert S. Snyder, Jackson, President; Dr. Clarence H. Webb, Jr., Jackson, Vice President; and Curtis W. Caine, Jackson, Secretary.

NU SIGMA NU ALUMNI

A preorganizational meeting of the Nu Sigma Nu Alumni will be held on Monday, May 9, at 5:30 p.m., in the Capital Room, Hotel Heidelberg. Mr. Jack Stokes, University of Mississippi School of Medicine, is chairman.

PAST PRESIDENTS

Past Presidents of the Mississippi State Medical Association and Woman's Auxiliary, respectively, will enjoy breakfast meetings on Wednesday morning, May 11. Auxiliary Past Presidents will meet at 8:00 a.m., in the Walnut Room, King Edward Hotel, MSMA Past Presidents will meet at 7:30 a.m., in the Capital Room, Hotel Heidelberg.

PHI CHI ALUMNI

Phi Chi Alumni will participate in a business meeting on Tuesday, May 10, in the Capital Room, Hotel Heidelberg, at 6:30 p.m. Officers are: Dr. Charles L. Neill, Jr., Jackson, President; and Dr. Leonard A. Bible, Jackson, Secretary.

SOUTHERN MEDICAL ASSOCIATION

A special invitational breakfast meeting of Southern Medical Association officials will be held Thursday morning, May 12, in the Capital Room, Hotel Heidelberg, beginning at 7:30 a.m. Dr. Guy T. Vise, Meridian, SMA Councilor for Mississippi, is host.

TENNESSEE ALUMNI

University of Tennessee medical alumni will enjoy a social hour and banquet Monday evening, May 9, in the Rose Room, Hotel Heidelberg, beginning at 6:30 p.m. Dr. W. Johnson Witt, Jackson, is chairman.

TULANE ALUMNI

The Tulane University medical alumni are invited to participate in a fellowship hour and banquet in the Crown Ballroom, King Edward Hotel, beginning at 7:00 p.m. Dr. J. Harvey Johnston, Jackson, chairman, will furnish details and make tickets available.

The President Speaking

STANLEY A. HILL, M.D.
Corinth, Mississippi

The 92nd

ELSEWHERE IN THIS ISSUE is the excellent program of the 92nd annual session of the Mississippi State Medical Association. Each of our six scientific sections are vying for the best presentations. The eloquent orator who will deliver the Distinguished Service Address has been exhaustive and untiring in the preparation which involved much research. The subject, a personality whose memory is revered by all, will be announced at the meeting.

A topic of wide interest will be found on the agenda of the section on medicine, Mississippi's Future Contributions to Medical Education. The guest author, a native of Mississippi, a member of this association in 1915, and a medical teacher, is a member of the Council on Medical Education and Hospitals of the American Medical Association. These attributes combine to make the speaker exceptionally well qualified to discuss the subject.

In accordance with tradition the session will begin with the House of Delegates. In this assembly will be found a group who work diligently to advance medicine in Mississippi. I strongly urge that every county be represented by a delegate who will attend and participate in all meetings of the house. Resolutions to gain action of the association may be introduced in the house by your delegate. Then any member, delegate or not, may debate the proposition in the reference committee. If the resolution has merit, there is a strong likelihood that it will be adopted.

The Woman's Auxiliary under the able leadership of the president, Mrs. James T. Thompson of Moss Point, has done much to strengthen our position in both public relations and legislation. We gratefully recognize our best ally and invite continued help. In the role of helping make the approaching annual session a success, each auxiliary member is urged to produce the attendance of one medical couple not present last year.

Meet me in Jackson May 10-12 and let's enjoy the 92nd. ★★★

JOURNAL OF THE
MISSISSIPPI STATE
MEDICAL ASSOCIATION

Volume I, Number 4

April 1960

EDITORIALS

The Big 92nd

THE MISSISSIPPI STATE Medical Association will convene in annual session at Jackson May 10-12, 1960, for the 92nd time in 103 years. The occasion is both a formal ending and beginning of association years as well as an annual scientific climax to clinical study and investigation. The association will hear a stewardship accounting from its officers, trustees, councils, and committees in the House of Delegates. New courses of action will be charted.

The annual session is every member's affair. Of most immediate value to physicians is the Scientific Assembly consisting of the several scientific sections. Here may be found a varied, stimulating postgraduate lecture series highly intensified and compressed into three days. Before and during the annual session, almost two dozen specialty groups will conduct meetings of particular interest to many members. Informal scientific discussion with visiting essayists and local colleagues will add impact to professional education values.

The House of Delegates will meet May 10 and 12 to review every aspect of association operation and policy. Every member has the right and privilege of attending meetings of the house. Although the floor is reserved for those who are delegates, each member of the association may make his voice heard in issues being considered in reference committees where debate usually occurs. Association policy and action decisions are those of its members and the delegates are eager to have the widest possible participation by physicians in reaching wise, considered positions.

Then there's the matter of fellowship and renewal of old friendships at an annual session. Medical alumni groups representing the University of Mississippi, the Tulane University, and the University of Tennessee plan such occasions. The annual association banquet and dance will be an entertainment highlight. Some medical fraternities will meet.

The scientific and technical exhibit will be one of the largest in recent annual session history, offering almost 80 separate presentations. Colleagues will present findings from investigations, case studies, and other scientific work of value to all attending. The technical exhibit offers a meeting ground for clinicians and the incomparable American pharmaceutical industry where recent product information is offered.

And the ladies are in the picture, too, because the Woman's Auxiliary to MSMA will conduct its own concurrent annual session with special events for its membership. The big 92nd is a medical family affair.

The co-headquarters hotels, the Heidelberg and the King Edward, will offer superior accommodations, since each has been engaged in recent modernization and renovation programs. The Heidelberg will be headquarters for the House of Delegates, scientific and technical exhibits, and the Scientific Assembly. The King Edward is Auxiliary headquarters as well as that for most specialty groups. Early reservation arrangements are advised in the hotel of individual choice including the Robert E. Lee and Walthall.

Plan now to be at Jackson because the 92nd Annual Session will be only as successful as Mississippi physicians make it. ★★★

Build Them to Crash!

I

The American automotive industry will build and sell almost six million units in 1960 and of every two cars rolling off Detroit's assembly lines, one will be involved in an injury-producing crash during its estimated useful life of eight years. Couple this with the fact that archaic driver licensing laws in most states permit potential killers to roam the nation's highways at will, add components of speed and alcohol to the lethal equation, and you have a near-perfect formula for that exquisite system of traumatic murder which polite society calls automobile accidents.

Death by traumatic injury ranks third among all causes, pushing hard against heart disease and cancer. More than half of all traumatic deaths are related to automobiles. Despite these awe-inspiring, sobering facts, the American public seems blissfully content to die on credit in an overpowered, overchromed, overfinanced means of violence called the modern motorcar.

II

These tragic circumstances were, if anything, made worse by post-Korean prosperity and plentiful consumer goods creating unprecedented demand for newer, bigger, and faster automobiles. Detroit responded in its best tradition and John Q. Public was accordingly armed with one of the deadliest devices in the history of man.

In 1952, Dr. William Liggett, then president of the Colorado State Medical Society, appointed a committee ". . . to study and, if possible, to provide a solution for the traffic death and injury problem." About the same time, the American College of Surgeons initiated studies on traumatic injury and death in auto crashes. The net result was a series of recommendations to the motor industry with respect to built-in safety. It was apparent to these medical pioneers in injury prevention that cars must be built to crash.

New safety features showed up on 1956 models and a few more appeared the following year. Among these were better door lock mechanisms, seat belts, improved safety glass, recessed steering columns, and padded instrument panels. But little was done beyond these beginning innovations. Actually, some authorities charge, there has been a regression in crash safety design during the past five years in spite of horsepower de-emphasis, better tires, and single unit frames.

III

The European miniature must come in for its share of the blame, too. Injury and fatality exposure are measurably greater in these thrifty little machines than in their more substantial American counterparts. Servicing difficulties, scarcity of parts, and lack of easily accessible expert maintenance sometimes makes foreign cars into mobile accidents looking for a place to happen.

The so-called continental models, those intended for sale and use in Europe, are notoriously below conventional safety standards required of import models. For example, many continentals have no safety glass, no sealed unit headlights, or even illuminated turn indicators. Obviously, these have no place on America's already dangerous highways.

IV

Cornell University has done yeoman service in its crash injury studies of accidents involving late model American automobiles. Almost 20 states, including Mississippi, are cooperating, usually through the state medical associations, highway patrols, and boards of health. Valuable data are being assembled and evaluated. It is now known why they die in auto crashes.

What's important is to go beyond the human quantity in preventing injury and death when an automobile accident occurs. With respect to the vehicle, it must be designed and built to prevent or reduce traumatic injury in crashes when, for some reason, the accident is not otherwise prevented. The latter, of course, has reference to human factors which may not be minimized in overall safety programs. It goes without saying that applicable laws must be strengthened and enforcement effort doubled and redoubled. The highway is the last place in the world—sometimes literally—for the reckless, the inebriate, and the incompetent.

V

The automobile manufacturing industry must accept its share of responsibility for injury prevention. New advances in technology and engineering technique are available to build more crash safety into motorcars. A bill, H.R. 1341, is pending before the Senate, having been passed by the House of Representatives last year. If enacted, it would require ". . . reasonable standards of safety for passenger carrying motor vehicles acquired by the federal government. . . ." Thus, it would apply to every American-made car.

Spiraling wages, union demands, uncertain steel supplies, foreign competition, and a host of business adversities hound the car manufacturer. Too, the public is fickle enough to eat ungraded meat without comment while exercising unbelievably fine discrimination in selecting an automobile. Safety education should therefore become an integral part of automotive advertising and merchandising.

And Detroit must take advantage of new and better materials to build safety in and injury out. For example, the Colorado State Medical Society, in cooperation with the Denver Police Department and the United States Rubber Co., gave the motor industry an interesting object lesson in "Operation Egg Drop." Using sheets of Ensolite, a U. S. Rubber plastic foam product exhibiting amazing energy absorptive qualities, five fresh hen eggs were dropped from a height of 115 feet in the Capitol rotunda upon this synthetic cushion just over one inch in thickness. Four eggs hit fairly, bouncing from 30 inches to eight feet in rebound. Three were broken in the usual kitchen manner but the yokes stood up smooth and round.

Just what does this prove? To get the answer, take a close look at the egg and the Ensolite pad. The average radius of a hen egg is about three cm. while its long diameter is roughly five to six cm. On the other hand, the diameter of the human skull is about 19 cm. which indicates a forehead radius of nine cm. Thus, four inches of Ensolite would probably prevent skull fracture upon traumatic impact proportionately equal to the egg falling 115 feet upon a one inch padding. The U. S. Rubber Co., in its investigations, hurled plastic replicas of the human head 70 miles per hour by catapult against steel plates covered with the energy-absorbing material. Fractures did not occur. That the foam plastic can prevent head injury on impact is re-enforced by the drop demonstration where the eggs were found to accelerate only to 55 miles per hour.

VI

Other illustrations can be described but the point seems established. Through design and construction safety, automobiles must have built-in survival characteristics as surely as riding comfort. This is a logical first step in a program of injury and death prevention requiring definitive if not drastic action from legislative, social, and enforcement viewpoints.

The medical profession has pointed the way. Others must follow. In the meanwhile, Detroit must build them to crash.—R. B. K.

Playing It Cosy

The Republicans have medical organization guessing on Forand-type legislation because the administration is playing it cosy on this vote bait issue. The word has been all over Capitol Hill that a "substitute" for the Forand bill might be forthcoming from the minority sides of the House and Senate with White House blessings. At first, the rumble was that a proposal for federal reinsurance might be advanced under which the solvency of voluntary health and medical plans would be underwritten with tax funds.

Most Mississippi physicians will recall that the first Eisenhower administration made such a proposal. The American insurance industry and most voluntary prepayment plans felt that it was not only unnecessary but that federal underwriting might also bring about federal control. The first Secretary of Health, Education, and Welfare, Mrs. Oveta Culp Hobby, first chief of the WAC and Texas newspaper baroness, was administration spokesman for the proposition.

The measure was defeated in the House of Representatives on a motion to table made by none other than Mississippi's John Bell Williams who reminded his congressional colleagues that ". . . federal reinsurance is like cotton candy at the county fair: It looks inviting with pretty fluff and mass but when one bites into it, the confection is just so much air and phony substance."

Exactly what course the Republican administration may take is literally anybody's guess. There could, of course, be a measure put up which virtually duplicates the Forand bill but this seems unlikely because Ike's crowd doesn't go for the "me, too" role. There might be an effort to expand public assistance medical programs under the four category titles of the Social Security act; this has been done before. Finally, there is a possibility of an earmarked tax for care of the aging under Social Security which could take almost any form and not differ too drastically from Mr. Forand's AFL-CIO program.

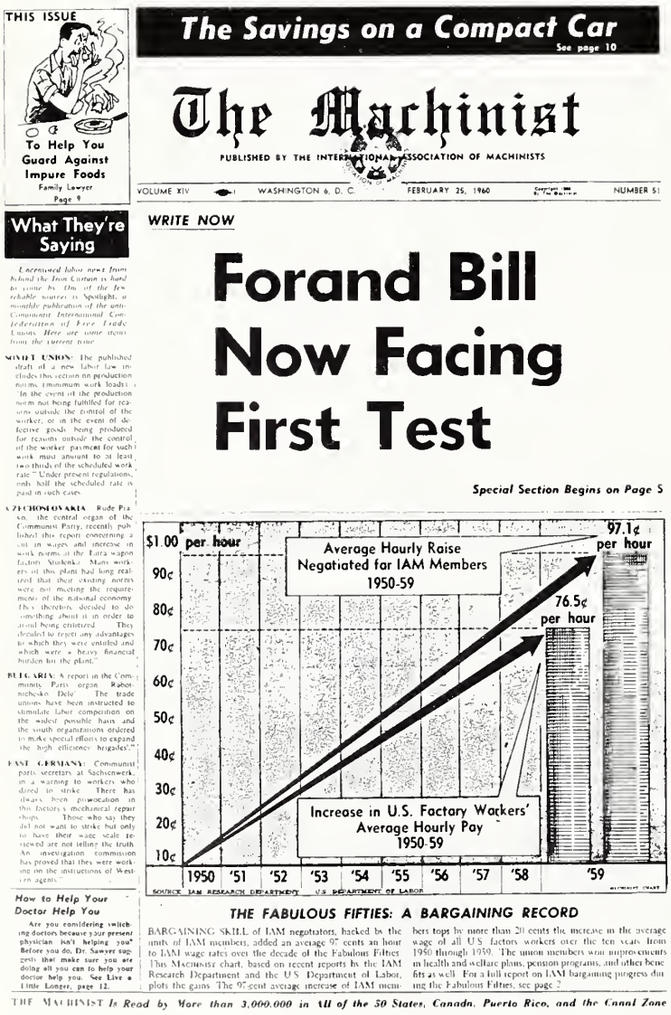
In any event, the Republicans will have to reverse their prior utterances if they decide to jump on the liberal bandwagon; Secretary of Health, Education, and Welfare Flemming testified in flat opposition to Forand last July. There is some speculation that the GOP has more to lose than to gain by taking such a course at this late stage of the game.

All of which goes to prove that the staunchest, sanest, most solid men in the Congress are conservative Southerners, dedicated to private enterprise, the principle of local self-determination, and common sense.—R. B. K.

The Inconsistent IAM

Consistency is a jewel, nearly everybody agrees, but the International Association of Machinists, an AFL-CIO union affiliate, knows little of the qualities of such gems. This large, well-heeled labor group represents tool and die makers, mechanics employed by railroads, bus carriers, and airlines, automobile mechanics, and most factory workers in machine industries. It is one of the more vigorous supporters of the Forand bill, H.R. 4700.

IAM publishes a weekly tabloid newspaper, the *Machinist,* in which it exhorts members to pressure the Congress for more and more welfare handouts and devotes major space allocations to boasting of wage and benefit gains through contract bargaining with industry. But the *Machinist* edition of February 25, 1960, is a jewel of inconsistency, eloquently testifying to labor philosophy in support of more income for less work. Page one is a classic.



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To Help You Guard Against Impure Foods
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The Machinist

PUBLISHED BY THE INTERNATIONAL ASSOCIATION OF MACHINISTS

VOLUME XIV — WASHINGTON 6, D. C. — FEBRUARY 25, 1960 — NUMBER 51

What They're Saying

Uncensored labor news from behind the Iron Curtain is hard to come by. One of the few reliable sources is Spotlight, a monthly publication of the anti-Communist International Confederation of Free Trade Unions. Here are some items from the current issue:

SOVIET UNION: The published draft of a new labor law includes this section on production norms. (minimum work loads): "In the event of the production norm not being fulfilled for reasons outside the control of the worker, or in the event of defective goods being produced for reasons outside the control of the worker payment for such work must amount to at least two-thirds of the scheduled work rate." Under present regulations, only half the scheduled rate is paid in such cases.

CZECHOSLOVAKIA: Rude Pravo, the central organ of the Communist Party, recently published this report concerning a cut in wages and increase in work norms at the Zatra wagon factory Stodenka: Many workers of this plant had long realized that their existing norms were not meeting the requirements of the national economy. This, therefore, decided to do something about it in order to avoid being criticized. They decided to forgo any advantages to which they were entitled and which were a heavy financial burden for the plant."

BULGARIA: A report in the Communist Party organ, Rabotnicheesko Delo: The trade unions have been instructed to stimulate labor competition on the widest possible basis and the youth organizations ordered to make special efforts to expand the high efficiency brigades."

EAST GERMANY: Communist party secretary at Sachsenwerk, in a warning to workers who dared to strike: There has always been provocation in this factory's mechanical repair shops. Those who say they did not want to strike but only to have their wage scale revised are not telling the truth. An investigation commission has proved that they were working on the instructions of Western agents."

How to Help Your Doctor Help You

Are you considering switching doctors because your present physician isn't helping you? Before you do, Dr. Sawyer suggests that make sure you are doing all you can to help your doctor help you. See Live a Little Longer, page 12.

WRITE NOW

Forand Bill Now Facing First Test

Special Section Begins on Page 5

THE FABULOUS FIFTIES: A BARGAINING RECORD

BARGAINING SKILL of IAM negotiators, backed by the units of IAM members, added an average 97 cents an hour to IAM wage rates over the decade of the Fabulous Fifties. This Machinist chart, based on recent reports by the IAM Research Department and the U.S. Department of Labor, plots the gains. The 97-cent average increase of IAM members tops by more than 20 cents the increase in the average wage of all U.S. factory workers over the ten years from 1950 through 1959. The union members won improvements in health and welfare plans, pension programs, and other benefits as well. For a full report on IAM bargaining progress during the Fabulous Fifties, see page 2.

THE MACHINIST *Is Read by More than 3,000,000 in All of the 50 States, Canada, Puerto Rico, and the Canal Zone*

In a screaming streamer, the paper proclaims that the Forand bill is about to face its first test, inviting the reader to jump inside to a special section replete with samples of letters to congressmen and words of wisdom from Mr. Forand himself. The lower portion of page one is braggadocio to the fifth power on how much wage increase IAM has secured for its members. A special story in this connection may be found on page two.

The arguments for the Forand bill are found floating in crocodile tears shed in behalf of the poor, near-destitute machinists who can't afford to be sick. In the wage increase story, the union brags about securing an average hourly pay increase of 97.1 cents per hour for its members during the period 1950-59. Further, it is stated that the overall average wage increase for U. S. factory workers during the same period was only 76.5 cents per hour. Hence, everyone ought to join the International Association of Machinists.

Just what are the facts on wages received by IAM members? U. S. Department of Labor statistics show that the average machinist receives $2.68 per hour throughout American industry. Among these workers, the tool and die makers take the cake with $3.12 per hour. In a 40 hour week during which no overtime or fringe benefits are computed—and there's plenty of each—the average machinist makes $114 while the tool and die maker elite carry home $124.80, good wages by anybody's measure. This means that the machinist receives an average pay of $5,928 per year and the tool and die man gets just under $6,500, not exactly destitution level compensation.

Add in the time-and-a-half to triple overtime and a host of fringe benefits including health insurance, unemployment or layoff compensation, severance pay, vacations, and a sackful of locally negotiated benefits and the machinists seem to deserve little or no sympathy with respect to improverishment. What faces a test isn't the Forand bill but the taxpayers' pocketbook at the hands of organized labor.

Forecast: More and Better Care

Four out of 10 Mississippi physicians are under 40 years of age and eight out of 10 haven't yet reached their sixtieth birthday. These are two happily astonishing facts of the "younging" trend firmly established over a 10 year span among members of the medical profession in the state. Studies and research conducted in the Comptroller Department at association headquarters just re-

leased pinpoint these and other facts about our growing physician population.

Strongest trends toward progressive increase are in the younger age groups with significant gains in the under-40 and 40-to-49 brackets. Of the state's 1,682 licensed doctors of medicine, four out of 10 are under age 40; one of four is in the 40-to-49 group; one in seven is in the 50-59 category; and only one out of five is aged 60 or over.

TABLE I—AGE DISTRIBUTION, ALL MISSISSIPPI PHYSICIANS, AS OF JANUARY 1, 1960

Age Group	*Total*	*Percentage*
Under 40	664	39.5
40-49	370	25.6
50-59	258	15.3
60 and over	405	20.6
Totals	1,682	100.0

Most doctors practice in communities larger than the 2,500 population classification and these tend to be older than their metropolitan colleagues. Less than one-third of Mississippi's professional medical people are in smaller communities while almost 1,200 practitioners have chosen larger population centers for location. Fewest in the under-40 age groups are located in the rural areas while more than half of the 60-and-over physicians are actually in small towns.

Urban-rural distribution of physicians aged 40 up to 59 is about three to one city over rural community. But because Mississippi is mainly a rural state, the figures lend themselves to easy misinterpretation. Excellent highway communication, optimum distribution of hospital facilities, and close median proximity of population centers make medical care readily accessible despite town and country division. Not showing up in statistical presentations are these low median distances between more heavily populated centers.

TABLE II—URBAN-RURAL DISTRIBUTION—ALL PHYSICIANS, AS OF JANUARY 1, 1960

Size Community	*Under 40*	*40-49*	*50-59*	*60 and over*	*Total*
Under 2,500	199	79	50	166	494
Over 2,500	465	291	208	224	1,188
					1,682

In less than a decade, the state's physician population has grown 15 per cent while overall demographic increase has been only about 3 per cent. Of equal importance is the trend toward younger and, hence, more recently trained doctors. During the past eight years, the over-60 group has decreased about a third as life attrition takes its inevitable toll. Similarly, dramatic increase is observed in the under-40, 40-49, and 50-59 age brackets.

TABLE III—COMPARATIVE GAINS: JANUARY 1, 1952—JANUARY 1, 1960

	Age Group				
Year	*Under 40*	*40-49*	*50-59*	*60 and over*	*Year Total*
1952	437	301	153	570	1,461
1953	489	312	159	528	1,488
1954	535	320	169	514	1,528
1955	548	334	174	476	1,532
1956	598	331	204	452	1,585
1957	602	350	226	431	1,609
1958	615	351	239	428	1,633
1959	614	367	257	405	1,643
1960	664	370	258	390	1,682
Net Change	+227	+69	+105	-180	+221

Mississippi State Medical Association
Comptroller Department, February 22, 1960

What does this trend mean in pragmatic terms to Mr. Average Mississippian? For one thing, it means that a vigorous, younger, recently trained physician is available. Further, where there were formerly six doctors, there are now seven even though the population segment receiving medical care is barely up to 100 from 97. The growth pattern is sound with every earmark of permanency.

No, there is no shortage of physicians in Mississippi nor is there indication that the state runs any risk—however slight—of facing such a problem.—R. B. K.

SOMEONE SHOULD TELL FORAND

There is a wicked inclination in most people to suppose an old man decayed in his intellects. If a young or middle aged man, when leaving a company, does not recollect where he has laid his hat, it is nothing; but if the same inattention is discovered in an old man people will shrug up their shoulders and say: "His memory is going."—Samuel Johnson

Domestic Journals

Venereal Disease, Old Plague—New Challenge. T. Lefoy Richman: Public Affairs Pamphlet No. 292 (January) 1960.

Venereal disease is an old problem. No nation has ever completely conquered it. The new facet to the situation, as least in the United States, is the shifting of afflicted social groups. Today's hardest hit group is from 20 to 24, and teenagers are entering into the VD picture more and more.

In the new Public Affairs Pamphlet, Mr. Richman, associate executive director of the American Social Health Association, discusses some aspects of the problem. His thesis is that the rise of VD in the United States and its spread to younger age groups are directly connected with an "increasing casualty of sexual behavior." Unfortunately, Mr. Richman's morality clouds his objectivity. He becomes so involved in the right and wrong of the situation that he neglects to point out certain fundamentals.

Author Richman links the VD problem to practically every other social ill known to man. He places a great deal of the blame on "the sexual climate"—main characteristics are "a breakdown in morality among adults, shifting down to their children, and vanishing sex taboos."

The "sex-sell" and the use of sex in business also comes in for their share of condemnation. What Mr. Richman does not seem to realize is that sex is here to stay and that some way to control VD, other than banishing sex from society, is going to have to be discovered.

One primary weakness of the paper, which is inherent in any work on social problems, is the inaccuracy of statistics. There is virtually no way of determining how many persons contract venereal disease each year, any more than it can be determined exactly how many illegitimate babies are born or how many extra-marital affairs are going on.

Mr. Richman points out that many VD cases treated by private physicians are not reported—he estimates that only one in four is turned in. He advocates more accurate reporting and interviewing on the part of physicians.

Throughout the pamphlet the author urges parents and communities to educate their teenagers in the matter of venereal disease. "Education for the prevention of VD begins in the family, in situations which teach children to trust themselves, to get satisfaction out of personal relationships, to work productively, to develop respect for self, peers, and parents," he writes. Yet Mr. Richman does not outline exactly what he considers adequate education in the rather touchy matter of venereal diseases.

Besides the extreme concentration on the morality of the problem, the publication is a worthwhile contribution to VD literature. Author Richman describes the fading out of the prostitute as a primary carrier and the substitution of the "amateur." He also tells of the little known profession of the VD investigator, who he is, how he is trained, and what he accomplishes.

Mr. Richman's most constructive suggestion on this age old problem is made almost as an aside. He writes, "It has become apparent that drugs don't stop VD in the population. Indeed, it is pertinent to note that communicable disease has rarely been eradicated with treatment alone, and that eradication without some form of immunization is least likely in the case of these most social of diseases."

Admittedly, VD has more moral aspects than most any other disease. However, the very fact that the strictest moral systems known to history still had venereal disease shows that a purely moral attack will not conquer the problem. What is needed is a more scientific and objective approach.

Perhaps the Public Affairs Committee, a nonprofit educational organization which has accomplished a Herculean task in educating the American public on vital economic and social problems, will see fit to publish a strictly scientific treatise on this pertinent subject.

("Venereal Disease" may be secured from Public Affairs Committee, 22 East 38th Street, N. Y. for $.25.)

Papago Indian Medicine. Joseph G. Lee: Ariz. Med. 17:87-89 (Feb.) 1960.

Do Papago Indian medicine men really have a cure for rabies in animals and men? Probably not, but intriguing, unanswered questions about ancient tribal practices suggest that medicine men may be applying scientific medical principles subtly concealed in their rituals.

"There is a universal factor which operates in both modern medicine and that practiced amongst the primitive people of the world," the author states. "It is an emotional factor of belief or

faith. . . ." The special emotional relationship between practitioner and patient is by no means confined to medicine. This *rapport* may be found between teacher and pupil as well as leader and follower.

The Papago medicine man's "professional bag" is a basket containing such unlikely items as leaves, bits of rock, a frog leg, toys, and trifles of nature, but those who know the Papago see no humor in this ritualistic armamentarium. Rather, it is explained, this is a psychological means used by the tribal practitioner to induce understanding, perhaps what amounts to primitive psychoanalysis. The serious student cannot but wonder about documented events in tribal medicine.

A few years ago, a Papago Indian woman was badly bitten by a rabid coyote. The animal was killed and its head was sent to the Arizona state laboratory where the brain was found to contain Negri bodies. Meanwhile, the woman refused the Pasteur treatment by the white physician on the reservation, preferring care by the medicine man. Weeks elapsed and her wounds healed. Months later she had demonstrated no sign or symptom of rabies. A farcial hoax? Perhaps . . . but documentation seems clear enough.

What about smallpox vaccination among these ancient people? When a smallpox threat arose some years ago, physicians encountered little difficulty in vaccinating more than 400 Papago children, but the elders claimed they already possessed an immunity. They proudly displayed vaccination scars on their wrists, stating that the medicine man had previously attended to this need. Investigation revealed that the medicine man sometimes takes a well Indian to the bedside of a person sick with smallpox. There he dips a "devil claw" into a pustule on the body of the ill person and draws the claw over a small scratch on the well Indian's wrist. The result is usually a slight sickness for a few days and the Papagos say that ". . . this is better than the white man's way."

It is speculated that these people learned vaccination from Mexican Indians who, in turn, learned it from Spanish missionaries. It is believed that the Spanish brought both Christianity and smallpox, and they may have also brought the European peasants' crude method of vaccination, too. Perhaps such missionaries as Father Kino, Garces, and others may have taught vaccination.

There is no contention for tribal medicine as a choice over scientific medicine, and the narrative is as much entertaining as educational. The Papagos, a tranquil, introspective people, concede values in scientific medicine. They talk little about their practices and medicine men are all but inaccessible to physicians seeking information on their ancient customs.

A Restricted Form of Cerebellar Cortical Degeneration Occurring in Alcoholic Patients. Maurice Victor, Raymond D. Adams, and Elliot L. Mancall: AMA Arch. Neurology 1:579-689 (December) 1959.

The authors describe a seldom-recognized clinicopathological entity occurring in advanced alcoholic patients, sometimes developing during a period of relative sobriety, but which does bear a direct relationship to the excessive ingestion of alcohol and to the associated malnutrition resulting therefrom.

Fifty such cases are cited, 46 examined personally and followed by the authors. Their conclusions are supported by 109 pages of clinical and pathological case reports including exhaustive historical data, post-mortem findings, neuropathological findings, microscopical findings, diagrams, tables, drawings, and microphotographs.

This special syndrome is characterized clinically by ataxia of gait and of the legs, even after prolonged sobriety, with relatively little involvement of the arms, speech, or ocular movements. After the condition has progressed for a short period, the pathological process levels off and is followed by years of stabilized disability.

Post-mortem examination reveals a stereotype of cerebellar pathology with the molecular and

"Turn around, quick! Here comes Doctor Turner!"

granular layers narrowed and reduced in size, and with Purkinje cells almost wiped out. These changes are restricted largely to the anterior and superior aspects of the vermis, the central lobule, the lingula and culmen and the declive, and to a very lesser extent, the cerebellar hemispheres. The authors speculate that circulatory factors determine why the damage should be concentrated in this small area.

The period of heavy excessive drinking extends from seven to over 25 years. In these reported cases, whiskey was the preferred drink, though other beverages were common. Forty were steady daily drinkers; eight were periodic drinkers. Most had suffered other serious alcoholic complications. Earliest age of onset was 31, latest 63 years. Earliest symptom was always a complaint of station-gait abnormalities, e.g. "weak legs," "rubber legs," staggering, and stumbling (broad base, trunk pitched slightly forward, and arms held stiffly away from the sides, often with instability of trunk and sometimes tremor of head). Early reeling gait later changed to lilting type more noticeable in making rapid postural changes. Heel to toe walking and heel to shin coordination were very poor. Lesser incoordination in arms and occasional intention tremor were seen. Nystagmus, spasticity, and rigidity were absent.

The authors reviewed the medical literature exhaustively; reports of 60 other cases by other workers are noted. Etiology, cerebellar degeneration in animals, and the differential diagnosis with relation to Wermicke's disease are all discussed.

This syndrome with onset frequently in periods of sobriety is probably often unrecognized as a sequel of alcoholism. The authors state that this alcoholic variety is the commonest form of chronic cerebellar disease.

Studies on Live Poliovirus Vaccine: Its Neurotropic Activity in Monkeys and Its Increased Neurovirulence After Multiplication in Vaccinated Children. J. L. Melnick; M. Benyesh-Melnick; and J. C. Brennan: JAMA 171/9:1165-1172 (October 31) 1959.

Tests in monkeys of the live poliovirus vaccines currently being used in field trials have shown them to be more neurovirulent than was found in the laboratories of the proponents of the vaccines. The range of neurovirulence varied from the least virulent (Sabin's type 2)—which reacted negatively after intracerebral injection but contained at least 2,500 monkey poliomyelitis doses per milliliter after intraspinal injection—to the most virulent (Lederle's types 1 and 2) which contained at least 300 monkey doses per milliliter by intracerebral injection and 300,000 monkey doses per milliliter by intraspinal inoculation. The higher titers found by intraspinal injection seem to hinge on the use of a fine needle and the retention of the virus inoculum within the spinal cord.

The degree of genetic stability of the attenuated poliovirus as it undergoes multiplication cycles in vaccinated children and their contacts is of the utmost importance. The use of tissue-culture markers for monitoring the stability of attenuated strains in the field is illustrated in a study of Sabin's strains fed to children in Mexico City. The excreted viruses which showed the greatest alteration in the tissue-culture *d* and T markers also showed the greatest increase in monkey neurovirulence (active after intracerebral injection, and only a few virus particles sufficing to paralyze monkeys after intraspinal injection).

One altered strain was tested in a chimpanzee and found to be paralytogenic when inoculated intraspinally. That the increased monkey neurovirulence was not a laboratory artifact, brought on by cultivation of the virus under conditions favoring the growth of virulent particles, is shown by the finding that the few virus particles present in rectal swabs (10 to 60 tissue culture doses) were sufficient to paralyze monkeys inoculated intraspinally.

In the course of the Mexican study, it was found that many serologically susceptible children (i.e., free of poliomyelitis antibody) were resistant to infection by the vaccine. As such children were found to be already excreting a nonpoliomyelitis enterovirus at the time the live poliovirus vaccine was fed, the resistance has been attributed to the current infection with the nonpoliomyelitis enterovirus blocking the implantation of the vaccine virus. Interference of this sort might well limit the effectiveness of an orally given vaccine in areas where enterovirus infections are common.

The question of safety of the live poliovirus vaccine resolves itself on the frequency of disease in vaccinated children and their contacts, as compared with that anticipated from natural infection with wild polioviruses. In measuring the safety and effectiveness of live poliovirus vaccine, field investigators should consider not only the number of children fed but also the number already naturally immune and the number of poliomyelitis cases to be expected if the same population were exposed to virulent virus.

Today's Women Weigh Less, Men More

Atomic age women are slimmer than their sisters of the hoopskirt and flapper eras while modern men outweigh their ancestors.

This was the finding of the 1959 Build and Blood Pressure Study conducted by the Society of Actuaries. The investigation covered the experience of several million people insured by 26 life insurance companies in the United States and Canada during the period 1935-1953.

In many respects the new tables of average weights developed from the Study's data differ from the old tables in common use, which were based on similar studies in the periods 1885-1900 and 1909-1927. Generally, the new average weights are less for women and greater for men.

For women age 25 the new average weight is five to six pounds less than that shown in the last study; at age 35 it is two to four pounds less, and at age 45, two to three pounds less. The Study attributed this decrease in feminine size to the weight control campaigns which have swept the country in the last two decades and to some extent, to the lighter weight of women's clothing.

For the men, the increase in average weight, compared with earlier standards, varies appreciably with height. The greatest increase in weight fell among the short men, amounting to five pounds or more at most ages. For men of average height the increase is from two to four pounds, and for tall men from one to three pounds, the larger difference being found under age 45. Evidently, the male part of the population did not fall prey to the diet fads as did their feminine counterparts.

As age increases, the average weights for both sexes go up, but the pattern is somewhat different. For the men, the averages rise rapidly in the 20's and early 30's, but the rate of increase slacks off and remains small during the 40's and 50's. The women's average weight rises fairly steadily with age, with the most rapid increase falling between the mid-30's and mid-40's.

The new Build and Blood Pressure Study showed that people below average weight have the lowest mortality rate. The researchers pointed out that Americans need to adjust their dietary habits to the new age of automation. Labor saving devices have cut down the physical labor of the average American to a pittance of what his great grandparents did. And yet, the American diet remains essentially the same. According to the Study's findings, new diets and regular exercise are needed to reduce American waistlines and mortality rates.

TABLE 1—AVERAGE WEIGHTS FOR MEN AND WOMEN

According to Height and Age

Height (in Shoes)	*Weight in Pounds (in Indoor Clothing)*					
	Ages 20-24	*Ages 25-29*	*Ages 30-39*	*Ages 40-49*	*Ages 50-59*	*Ages 60-69*
			MEN			
5′ 2″	128	134	137	140	142	139
3″	132	138	141	144	145	142
4″	136	141	145	148	149	146
5″	139	144	149	152	153	150
6″	142	148	153	156	157	154
7″	145	151	157	161	162	159
8″	149	155	161	165	166	163
9″	153	159	165	169	170	168
10″	157	163	170	174	175	173
11″	161	167	174	178	180	178
6′ 0″	166	172	179	183	185	183
1″	170	177	183	187	189	188
2″	174	182	188	192	194	193
3″	178	186	193	197	199	198
4″	181	190	199	203	205	204
			WOMEN			
4′ 10″	102	107	115	122	125	127
11″	105	110	117	124	127	129
5′ 0″	108	113	120	127	130	131
1″	112	116	123	130	133	134
2″	115	119	126	133	136	137
3″	118	122	129	136	140	141
4″	121	125	132	140	144	145
5″	125	129	135	143	148	149
6″	129	133	139	147	152	153
7″	132	136	142	151	156	157
8″	136	140	146	155	160	161
9″	140	144	150	159	164	165
10″	144	148	154	164	169	*
11″	149	153	159	169	174	*
6′ 0″	154	158	164	174	180	*

* Average weights not determined because of insufficient data.

Source: *Build and Blood Pressure Study, 1959,* Society of Actuaries.

AMA Questions Kintner Plan as MSMA Devises Keogh Program

New obstacles reared up in the path of the Kintner-type retirement programs for medical practice groups and the American Medical Association has raised new questions as to applicablity of the Internal Revenue Service decision and regulations for organizing local plans.

The much heralded concept, based on a tax court decision in a suit brought to test existing federal tax laws, appears to permit unincorporated groups of physicians to enjoy certain corporate tax deduction benefits in funds set aside for retirement and pension purposes. The Kintner plan is built around the "professional association" idea but this refers to an economic relationship among professional colleagues in the same medical group rather than a professional society.

Last December, the Internal Revenue Service published criteria for meeting the tax court decision and some plans are being organized through insurance and investment agencies. In a recent letter to Dana Latham, commissioner of internal revenue, Dr. F. J. L. Blasingame, executive vice president of AMA, questioned both validity and applicability of the IRS criteria.

KINTNER: 'UNCERTAINTY AND CONFUSION'

Dr. Blasingame said that ". . . the regulations are not likely to attain the desired objectives of clarifying, for tax purposes, the distinctions between associations and partnerships." His principal objection was predicated on the fine point that the regulations require that local law shall be a consideration in determining whether the legal relationships which have been established in the formation of the practice group are such that IRS standards shall have been met.

"State laws pertaining to associations and partnerships not only differ greatly," Dr. Blasingame wrote, "but in many states there are neither statutes nor adequate judicial precedents dealing with associations. The introduction of local law as a factor in determining the tax clarification of organizations would only serve to create uncertainty and confusion."

The Mississippi State Medical Association has never endorsed the Kintner plan, believing that the tax court decision foundation of authority is both insufficient and flimsy. Legal observers agree that the entire basis for the program might be overturned by a superior court reversal.

KEOGH IS MSMA'S CHOICE

MSMA's Board of Trustees has supported Keogh-type legislation vigorously and preliminary plans have been approved for initiation of an association-sponsored program which would cost physician-participants nothing in acquisition or maintenance costs. The Keogh bill is now in the Senate Finance Committee where a majority of members are said to favor its enactment. It passed the House of Representatives during the first session of the current Congress.

Commenting on the matter of voluntary retirement programs for the professional self-employed, MSMA board chairman H. H. McClanahan, Columbus, said that ". . . any plan endorsed by the association should contain every possible assurance as to security, growth factor potential, simplicity, minimum or no acquisition cost, and maximum yield consistent with these stated objectives."

Dr. McClanahan said that preliminary agreements between the board and ". . . a major Mississippi financial institution" have been concluded pending enactment of Keogh legislation. The agreement is one in principle, binding neither the state medical association nor the financial institution in contractual agreement. Similarly, he said, no physician has been committed in any respect to participation or even interest in the plan.

Other objections raised by AMA to the Kintner program include proposed requirements relating to continuity of life, centralization of management, liability limitation, and free transferability of interest to determine whether an organization shall be regarded for federal tax purposes as a partnership or an association.

AMA 50-Year Club To Be Organized

Mississippi physicians who have been in practice 50 years or longer are eligible to join the Fifty-Year Club of the American Medical Association.

Interested physicians should write Dr. J. H. McCurry, Cash, Arkansas, who is club organizer.

The first meeting will be held in Washington, D. C., at the Clinical Meeting November 29 to December 2, 1960.

Good Time Spending Tops Health Outlay

Americans are spending twice as much money for recreation, alcoholic beverages and tobacco as they are for medical care, the Health Insurance Institute reported recently. Two out of every 18 dollars the public spends for its personal needs goes for recreation, alcohol or tobacco compared to an expenditure for medical care of one out of every 18 dollars, said the Institute.

According to data based on 1958 figures and released by the U. S. Department of Commerce, Americans spent $293 billion on their personal needs.

Some $17 billion of this sum, or 5.8 per cent, was spent for recreation while $9.2 billion (3.1 per cent) went for alcohol and $6.3 billion (2.1 per cent) was used to purchase tobacco products, for a total of $32.5 billion, or 11 per cent of total personal consumption expenditures.

In comparison, $16.4 billion (5.6 per cent) was spent on medical care, stated the Institute. Other public expenditures in 1958 included $67 billion for food, $38 billion for housing, nearly $34 billion for transportation, $32 billion for clothing, accessories and jewelry, almost $4 billion for religious and welfare activities, and $3.4 billion for education and research.

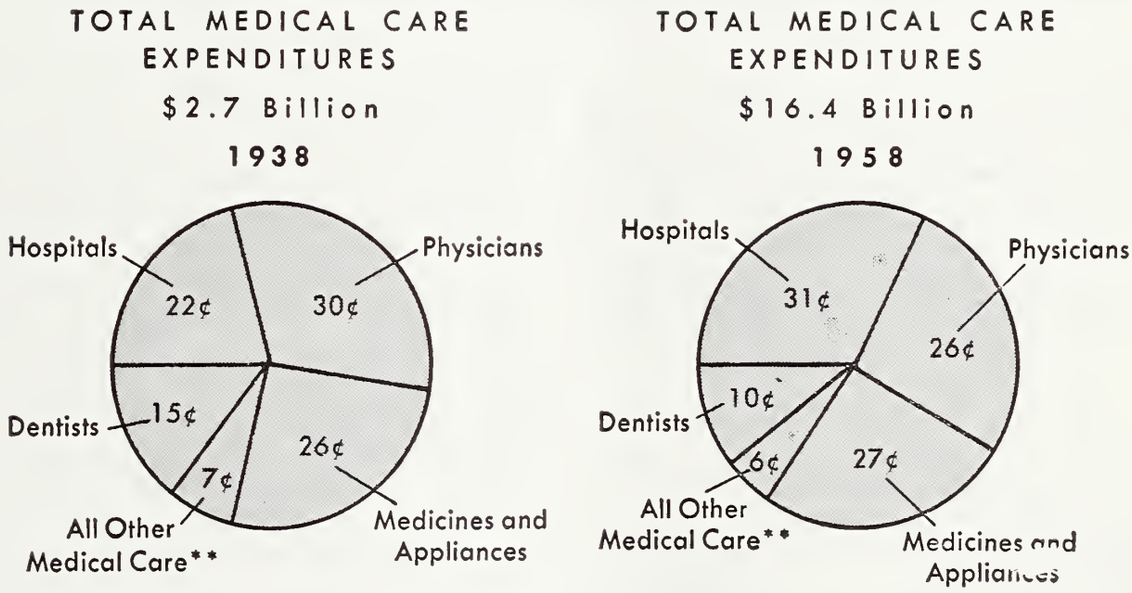
The distribution of each dollar spent for medical care changed sharply in the period from 1938 to 1958, said the Institute.

In 1958, physicians and dentists received a smaller share of the medical care dollar than they did in 1938, while hospitals, medicines and appliances received a larger share.

From each dollar of the $2.7 billion spent for medical care in 1938, physicians received 30 cents, but by 1958 doctors were getting 26 cents out of each dollar.

An even sharper drop in distribution of the medical care dollar was experienced by dentists, whose share of 15 cents on the dollar was reduced to 10 cents.

DISTRIBUTION OF THE MEDICAL CARE DOLLAR*



* Includes expenses for health insurance.
** Includes other professional services and nursing home care.
SOURCE: United States Department of Commerce and United States Department of Health, Education and Welfare.

Physicians and dentists have a smaller share of the U. S. health and medical care dollar as shown by this comparison of expenditure division in 1938 and 1958. Hospital cost spiral is reflected in near 50 per cent increase while drug share is up little, despite wide availability and use of new therapeutic agents.

The slack was taken up by hospitals, medicines and appliances, declared the Institute. Twenty-two cents out of every medical care dollar spent in 1938 was for hospital services, but by 1958, this slice of the dollar was up to 31 cents. Hospitals attribute this rise to the expansion of hospital services and their greater utilization which has increased the number and variety of skilled personnel required.

The rise was less dramatic in medicines and appliances, which climbed from 26 cents to 27 cents.

The amount spent for all other medical needs, which include other professional services and nursing home care, dropped from seven cents to six cents.

Medical License 'Right' Voided by Supreme Court

Neighboring Louisiana's state supreme court has supported the right of the board of medical examiners to deny medical licensure to a reciprocity applicant despite professional qualification claimed and established. The basic importance of the decision has been to reinforce the doctrine of privilege associated with the practice of a profession.

An applicant for medical licensure in the Pelican state sought reciprocity on New York and Texas licenses. When the board of medical examiners delayed, the applicant brought suit for issuance of a writ of mandamus to compel issurance of the license, alleging that proper application had been submitted and that all professional criteria prescribed by state law had been met.

Other allegations in the plaintiff's declaration were that the board had conducted an unlawful and improper hearing, arbitrarily rejecting the application. Answering the suit, the board of medical examiners said the license was denied because members were not satisfied as to plaintiff's good moral character, pleading that the decision was reached after careful consideration of all pertinent facts and not, as alleged, arbitrarily and capriciously.

Ruling on the case, the state supreme court said that ". . . the burden of proof was on (the physician) to satisfy the board . . . of good moral character . . ." which was not done. The respondent, meaning the board of medical examiners, was neither arbitrary nor capricious, delaying the decision after receiving derogatory information until the physician could reply.

The court ruling stressed basic differences between application for licensure and suspension or revocation proceedings where certain hearing rights accrue to the licensee. The precedent-setting case is styled *State v. Louisiana State Board of Medical Examiners,* 115 So. 2d 833 (La., Nov. 9, 1959).

100 GP's Attend Postgraduate Seminar

One hundred Mississippi general practitioners attended a February 25 Postgraduate Seminar in Jackson.

Sponsored by the Mississippi Academy of General Practice and the University of Mississippi School of Medicine with the cooperation of Lederle Laboratories, the program was divided into a morning lecture series and afternoon round-table discussions.

During the morning session, Dr. James G. Hughes, professor of pediatrics, University of Tennessee College of Medicine, Memphis, spoke on "The Physician's Responsibility to the Growing Child." Dr. Robert I. Wise, Magee professor of medicine and head of the department, Jefferson Medical College, Philadelphia, discussed "Clinical Experiences and Practical Recommendations for Management of Infections."

Dr. Simon V. Ward, assistant clinical professor of obstetrics and gynecology, Louisiana State University School of Medicine, New Orleans, talked on "Obstetrical Emergencies." Moderator was MAGP President R. J. Moorhead, Yazoo City.

During the luncheon hour, Dr. Beverly T. Mead, assistant clinical professor and director, general practitioner-psychiatry education project, department of psychiatry, University of Utah College of Medicine, Salt Lake City, spoke on "Behavior Problems in Children." Dr. John C. Longest, chairman MAGP program committee, State College, served as chairman.

Moderators for the afternoon session were Dr. Blair E. Batson, professor and chairman of pediatrics, Dr. Fred Allison, Jr., associate professor of medicine, Dr. Michael Newton, professor and chairman of obstetrics and gynecology, all of the University of Mississippi School of Medicine.

For the benefit of the wives, a lecture on "Interior Decoration" was given by Mrs. Sadie Rae Neelands, interior decorator for Batte Furniture Company, during the afternoon session.

Heart Association Slates Seminar

The Seventh Annual Cardiovascular Seminar is scheduled for April 6-8 at the University of Mississippi School of Medicine in Jackson.

Five guest speakers will conduct the seminar, which is supported by the Mississippi Heart Association.

Visiting lectures are to be Dr. E. Cowlus Andrus, cardiovascular division chief at Johns Hopkins; Dr. William B. Bean, internal medicine chairman at the University of Iowa; Dr. John D. Keith, cardiac department chief at the Hospital for Sick Children in Toronto; Dr. John W. Kirklin, Mayo Clinic surgeon, and Dr. Robert Rushmer, physiology professor from the University of Washington.

Held yearly since 1954, the short courses are attended by physicians from five southeastern states. The program is suplemented by a Cardiac Nursing Seminar, slated this year for April 29 at the University.

Four Doctors Named To Blue Cross Board

Four Mississippi physicians were named to three year terms on the Blue Cross-Blue Shield board of directors during the recent annual membership meeting of the Mississippi Hospital and Medical Service. To serve during 1960-63 are Drs. S. Lamar Bailey, Kosciusko; Joseph B. Rogers, Oxford; James G. Thompson, Jackson; and M. Q. Ewing, Amory.

The appointment of Dr. William N. Crowson, Clarksdale, to serve the unexpired term of Dr. W. H. Brandon, Clarksdale, who resigned for reasons of health, was confirmed. Dr. Stanley A. Hill, Corinth, MSMA president, nominated Crowson for the term which continues through the 1961 meeting.

All regular term directors named at the meeting were nominated by the House of Delegates during the 91st Annual Session last May. Eight other physicians are board members representing the association in management and policy aspects of the state-wide voluntary prepayment plan. These include Drs. Lamar Arrington, Meridian; B. B. O'Mara, Biloxi; A. L. Gray, Jackson; and Dr. Crowson, all serving terms during 1958-61.

Drs. G. Swink Hicks, Natchez; R. B. Caldwell, Baldwyn; George H. Martin, Vicksburg; and T. E. Ross, Hattiesburg, have 1959-62 tenures.

The Blue Cross-Blue Shield board has 36 members divided equally among representatives of the medical profession, hospital management field, and the public at large. Mr. W. W. Hollowell, Greenville, is president and Mr. Richard C. Williams, Jackson, is executive director.

Doctors Give $1 Million To Medical Schools

American physicians channeled $1,195,824.79 into their medical alma maters in 1959, according to the American Medical Education Foundation. Begun in 1951 as an American Medical Association program, the Foundation gives financial aid to the nation's medical schools.

Contributions to A.M.E.F. in 1959 showed an increase of $75,780.10 over the 1958 total. Since the 1958 fund included a $100,000 gift from A.M.A., the total increase in contributed money for 1959 was $175,780.10.

The amount of funds donated to the Foundation has increased 17.2 per cent since 1958 and 36.7 per cent since 1957.

A.M.E.F. records show that last year's contributors came from all 50 states, the District of Columbia, and Puerto Rico. California had the largest amount of contributors with 16,710, and Illinois' $200,471.56 was the biggest state donation. Total number of contributors was 55,399 as compared with 49,729 in 1958.

Mississippi doctors gave $5,180.50 to A.M.E.F. in 1959 with 194 contributing. Central Medical

"What's she got that I don't have?"

Society had the most contributors while East Mississippi Medical Society gave the most money. A 16 member M.S.M.A. committee supervises the A.M.E.F. program in Mississippi under the chairmanship of Dr. W. E. Caldwell, Baldwyn.

All funds received by the Foundation go to medical education—overhead and administrative expense are paid separately by A.M.A. Where gifts are "earmarked" for a particular school, the full amount of the contribution is sent in the donor's name. "Unearmarked" funds, comprising a majority of A.M.E.F. receipts, are distributed to accredited medical schools in three categories of grants: Class "A"—an equal amount to each of the four-year schools and a correspondingly lesser amount to the two-year institutions, Class "B"—an amount to each school based on enrollment, Class "C"—non-recurring, one-time grants to meet special needs of applying institutions.

Cancer Conference Set for July 20-21

The 14th annual Rocky Mountain Cancer Conference will be held in the Denver Hilton Hotel, Denver, Colorado, on July 20-21. Nearly 900 physicians from all over the nation are expected to attend the two-day scientific session, which is worth 10 AAGP Category I Credits.

The regional cancer-control meeting is jointly sponsored each year by the Colorado division of the American Cancer Society and the Colorado State Medical Society.

Tentative program plans call for a symposium on "Skin Cancer" on Wednesday morning, July 20 and a symposium on "Thyroid Lumps" on the following morning. Afternoon sessions on both days will be devoted to papers on cancer detection and treatment by six outstanding physicians.

Symposium participants and speakers are: R. Lee Clark, Jr., M.D., Houston, Texas; A. James French, M.D., Ann Arbor, Michigan; Roy L. Kile, M.D., Cincinnati, Ohio; Wendell G. Scott, M.D., St. Louis, Missouri; H. W. Schmidt, M.D., Rochester, Minnesota; and Willard P. VanderLaan, M.D., La Jolla, California.

E. Vincent Askey, M.D., of Los Angeles, California, President-Elect of the American Medical Association and Warren H. Cole, M.D., of Chicago, Illinois, President of the American Cancer Society, will also participate in the conference.

Rhode Island Explains Increased Labor Costs

Faced with the problem of explaining the cost of medical and hospital care to the public, the Rhode Island Medical Society's Physician Service joined with Blue Cross and the Hospital Association in a series of large paid advertisements. Points made:

"Human Services," labor, accounted for 70 per cent of the hospitals' operating expenses.

In 1946 there were less than 180 job classifications in hospitals. Twelve years later this had increased to 260 classifications; up 45 per cent.

In 1948 there were 214 employees per 100 patients, ten years later, 277 employees or an increase of 63 more men and women to take care of the average 100 patients.

While the number of patients admitted during the ten year period amounted to an increase of 43 per cent, the number of laboratory tests performed as a part of modern medical care had increased 161 per cent.

More than 75 per cent of the state's population is enrolled in Blue Cross with 65 per cent being covered by the Physician Service voluntary prepayment plan.

"Mrs. Brown wants to know how you expect her to take one pill three times a day."

Health Service Sponsors Community Cancer Fight

Application of existing knowledge of preventing and controlling cancer is being given added impetus this year through $1,500,000 appropriated by the Congress, the U. S. Public Health Service pointed out recently. This fund, earmarked for community cancer demonstration projects, is being administered by the Cancer Control Program, Bureau of State Services, Public Health Service, under the technical guidance of the director of the National Cancer Institute.

Local announcement of the program came from Dr. A. L. Gray, executive officer, State Board of Health.

The types of projects believed to offer the best opportunities at this time for demonstrating better ways of providing community cancer control services are:

1. Professional and technical education in cytology.
2. Screening for cancer of the cervix.
3. Selected educational projects, particularly public information and follow-up services, to emphasize the importance of periodic uterine cytology examinations.
4. Professional educational activities emphasizing the importance of including cancer diagnostic aids in complete health examinations.
5. Selected public educational projects on the desirability of and need for health maintenance examinations.
6. Evaluation of effectiveness of public educational activities.
7. Tumor registers collectings data of exceptional value.
8. Extension and evaluation of rehabilitation programs in cooperation with state rehabilitation agencies.
9. Selected projects demonstrating effective treatment for cancer in public beneficiaries of medical care.

The types of projects suggested are not meant to exhaust all possibilities. Other worthwhile locally-sponsored and locally-directed demonstration projects will be considered on their own merits.

Applications are accepted from nonprofit organizations and institutions and official health agencies. The State Board of Health and Public Health Service regional medical director are first to review and process applications. Requests are then submitted to the advisory committee to the Cancer Control Program and the National Advisory Cancer Council for recommendation. Formal action on applications and recommendations is taken by the chief of the Bureau of State Services, to whom authority has been delegated by the Surgeon General.

Projects may be approved initially for as long as three years. When activities are proceeding satisfactorily and funds are available, assistance continues through the approved period. In special instances, assistance may include the assignment of personnel and the provision of equipment and supplies. Additional information and application forms may be obtained from the State Board of Health at Jackson or any of the eight regional offices of the Public Health Service.

Pilot Issue of New Fishbein Magazine Is Latest News Medium

Newest medical publication to appear is *Medical World News,* a controlled circulation biweekly, showing up on 142,000 physicians' desks recently in pilot format. Editor is the sometimes controversial, always indefatigable Dr. Morris Fishbein, Chicago. The news size, news format periodical is published in New York.

The publication has a classic *Newsweek* layout, stressing an intermingling of socioeconomic articles and items with short form scientific news briefs. Personals on medical dignitaries are included as are professional management tips, news references of medical interest, and Fishbein editorials.

The magazine carries ethical medical product advertising in attractive four-color process. Regular publication schedules beyond the pilot issue of January 29, 1960, have not been announced.

New TV Series: 'Medicine—1960'

"Medicine—1960" is something new in the way of TV entertainment. The series, which is being syndicated by Screen Gems on video tape, consists of actual operations performed in hospitals in the San Francisco area.

All participants are what they profess to be—not actors. There are, obviously, no "scripts."

MEETINGS

NATIONAL AND REGIONAL

American Medical Association, June 13-17, 1960, Miami Beach. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago 10, Ill.

American College of Surgeons, October 10-14, 1960, San Francisco. William E. Adams, Secretary, 40 E. Erie St., Chicago 11, Ill.

American Society of Internal Medicine, April 1-3, 1960, San Francisco. Mr. Robert L. Richards, Executive Director, 350 Post Street, San Francisco 8, Calif.

Southern Medical Association, October 31-November 3, 1960, St. Louis. Mr. V. O. Foster, Executive Secretary, 2601 Highland Ave., Birmingham 5, Ala.

Gulf Coast Clinical Society, October 12-13, 1960, Biloxi, Mississippi. George W. Rogers, Secretary, P. O. Box 37, Handsboro, Miss.

STATE AND LOCAL

Mississippi State Medical Association, May 10-12, 1960, Jackson. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson, Miss.

Mississippi Academy of General Practice, September 28-29, 1960, Jackson. Miss Louise Lacey, Executive Secretary, Walthall Hotel, Jackson, Miss.

Amite-Wilkinson Counties Medical Society, First Tuesday March, June, September, December. S. E. Field, Centreville, Miss., Secretary.

Central Medical Society, First Tuesday Monthly, 6:30 p.m., Robert E. Lee Hotel, Jackson, Miss. C. G. Sutherland, 918 N. State St., Jackson, Miss., Secretary.

Claiborne County Medical Society. D. M. Segrest, Port Gibson, Miss., Secretary.

Clarksdale and Six Counties Medical Society, Fourth Wednesday March and September, 2:00 p.m., Clarksdale, Miss. Robert R. McGee, 150 Yazoo St., Clarksdale, Miss., Secretary.

Coast Counties Medical Society, First Wednesday March, June, September, and November. Charles N. Floyd, 1412-23rd Ave., Gulfport, Miss., Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Miss., Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando, Miss. L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Miss., Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Monthly, 7:30 p.m., Natchez Country Club, Natchez, Miss. W. T. Colbert, 539 Park Place, Natchez, Miss., Secretary.

North Central District Medical Society, Second Wednesday March and September. W. A. Middleton, 214 Summit St., Winona, Miss., Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December, Tupelo, Miss. Eugene M. Murphey, III, 421 Main St., Tupelo, Miss., Secretary.

North Mississippi Medical Society, First Thursday January, April, and October, Oxford, Miss. R. L. Wyatt, Holly Springs, Miss., Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. George B. Stewart, 215 Kirkwood St., Picayune, Miss., Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. Thomas F. Puckett, 715 Arledge St., Hattiesburg, Miss., Secretary.

Tri-County Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Miss., Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg, Miss. Thomas H. Mitchell, The Street Clinic, Vicksburg, Miss., Secretary.

WITHOUT BENEFIT OF FORAND

A recent survey by the Louisiana State Medical Society showed that the average doctor gives an estimated $3,531 of service per year to 341 indigent patients, and contributes $1,098 in cash each year to charity.

AUXILIARY

President Reports On Year's Work

The job of being president of the Woman's Auxiliary to the Mississippi Medical Association is indeed a job in the full sense of "work undertaken in gross," yet the task is so richly remunerative in honor, friendship, and happiness that the actual labor is completely forgotten in the counting of the resulting rewards.

During the year, 15 auxiliaries have been visited and a total of 5,893 miles covered in transit. This figure does not include the AMA Convention in Atlantic City, the SMA Convention in Atlanta, or the Presidents' Conference in Chicago. Nor is there any figure which can accurately portray the benefits which accrue to the traveler from these visits and conventions. Certainly, as time runs out in this medical year, the wish for greater accomplishments becomes more fervent even as one's physical being becomes more fatigued, but still the inner, spiritual being proclaims staunchly in retrospect, "it was worth every mile, every minute, every wakeful hour, and every aching finger!"

Of course, the headline news with the auxiliary now is the state convention in May. We are thinking it, talking it, planning it. Mrs. Fred Hollowell of Jackson is our convention chairman and is, together with her able committee, bending every effort toward making this, the 92nd Annual Session of the Mississippi State Medical Association, an occasion long to be remembered by auxiliary personnel.

The highlight of our program will be the address by the national president, Mrs. Frank Gastineau, of Indianapolis, Indiana. Mrs. Gastineau will speak at the luncheon on Tuesday, May 10, and later will install the new officers. Furthermore, we shall have with us a representative of the Southern Medical Auxiliary. The president, Mrs. John Chenault, Decatur, Alabama, at present has a conflicting engagement, but plans to appoint another officer if other arrangements cannot be made.

Another interesting feature, and one which will be the subject of much speculation among various auxiliary units, will be the presentation of AMEF certificates of achievement which will be awarded to the three organizations whose members lead in contributions to that vital program. Mrs. A. C. Bryan, Jr., of Meridian is state chairman of AMEF and will make the presentations.

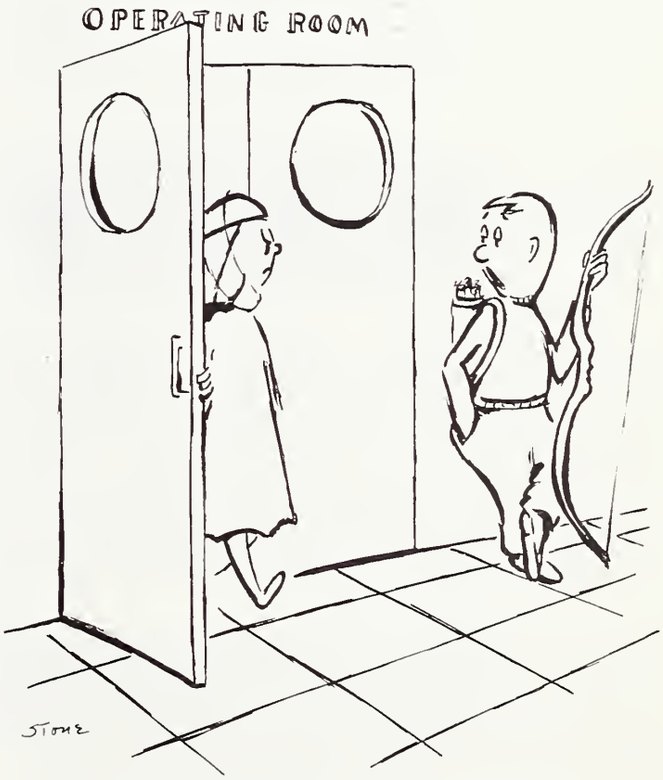
Everyone enjoys Jackson for, without a doubt, hostesses more gracious and solicitous than the women of Central Medical Auxiliary are not to be found. And so the watchword is "Come to the Convention"—come and renew acquaintances, register by all means, attend the business sessions, enjoy the social functions—"Come to the Convention."

Mrs. J. T. Thompson
Moss Point

Physicians Invited To Writing Institute

Mississippi physicians are invited to attend a one day Clear Writing Institute sponsored by the Industrial Editors Association of Mississippi. The Institute will be held April 29 at the King Edward Hotel in Jackson.

Featured speaker for the program will be Mr. Robert Gunning, nationally known authority on the subject of clear writing. The institute is open to all persons interested in communication improvement. Reservations may be made through Miss Joyce May, Mississippi Baptist Hospital, Jackson. Registration fee is $15.00 and includes a party the night preceding the institute and a noon luncheon.



"How soon can I get my arrow back?"

NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

APPLEWHITE, VICTOR HARRY, Soso. Born Bassfield, Mississippi, September 29, 1925; M.D., Louisiana State University, New Orleans, 1953; interned Hotel Dieu, New Orleans; elected December 10, 1959, by South Mississippi Medical Society.

JOHNSON, BEN BUTLER, Jackson. Born Brooklyn, New York, May 23, 1920; M.D., Harvard Medical School, Boston, 1944; interned New York Hospital, New York, residency in medicine, Bellevue Hospital, New York 2 years; fellowship in medicine, Bassett Hospital, Cooperstown, New York, 1 year; fellowship in medicine, Stanford University, San Francisco, 3 years; assistant professor of medicine, Stanford University, San Francisco, 3 years; certified by American Board of Internal Medicine, June 17, 1954; member, the Endocrine Society, American Diabetes Association, and American Federation for Clinical Research; assistant professor of medicine and chief of the section on renal diseases, University of Mississippi School of Medicine; elected February 2, 1960, by Central Medical Society.

DEATHS

BERNARD, BETHUNE CALDWELL, Mississippi City; M.D., University of Virginia, Charlottesville, 1914; interned Orange Memorial Hospital, Orange, New Jersey; residency Trudeau School of Tuberculosis, Saranac Lake, New York, 1916; residency Army School of Tuberculosis, 1918; member National Tuberculosis Association; died February 16, 1960, aged 70.

DABBS, JOHN TAYLOR, Nettleton; M.D., Atlanta College of Physicians and Surgeons, Atlanta, 1906; postgraduate work at Tulane University; died February 8, 1960, aged 83.

FUNDERBURK, DENVER COLORADO, Olive Branch; M.D., Memphis Hospital Medical College, Memphis, 1913; president DeSoto County Medical Society, 1940; emeritus member of M.S.M.A.; died February 19, 1960, aged 71.

MCCHAREN, LITTLETON LANE, West Point; M.D., Tulane University, New Orleans, 1941; interned Baptist Hospital, New Orleans; residency at Harvard General Hospital, Boston, 1942-45; died February 7, 1960, aged 46.

EPHEBIATRICIANS / Continued

What the adolescent needs most is reassurance about the vast, puzzling range of normal adolescent development. Most common problems involve growth, obesity, sexual maturation, acne, gynecomastia, failure in school, psychosomatic complaints, ulcerative colitis, and dysmenorrhea.

It is essential, says Biehusen, that the ephebiatrician have a knowledge of dermatology, hematology, allergy, and orthopedics so that the all important patient-doctor relationship need not be routinely interrupted by incessant referrals to other specialists.

More often than not, the teenster's problem is not illness or death, it's life. Physically, adolescents are the healthiest segment of the population and have the lowest mortality rate from illness of any group. Emotionally they are "climbing fool's hill" and situations that are small detours for adults can be complete roadblocks to teen-agers. Consequently, the ephebiatrician must be as good a listener as he is an advisor. "Success," says Biehusen, "is not gauged by the number of patients treated, but how well the patients benefit."

Ephebiatrics is a young speciality. It has yet to get its admittance papers to the medical dictionaries and the American boards. But as Henry A. Davidson writes in the January issue of the *New Jersey Medical Journal:* "Perhaps in the next generation's medical school catalogues ephebiatrics will fall in its logical place between pediatrics and geriatrics. And then, someone may develop medicine for the middle-aged—medieval medicine, maybe?" ★★★

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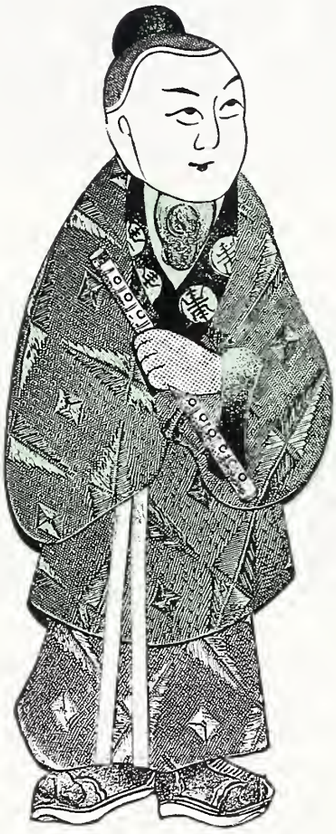
immortals of chinese mythology:



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LITERATURE / Continued

Reoviruses. A New Group of Respiratory and Enteric Viruses Formerly Classified as ECHO Type 10 Is Described. A. B. Sabin: Science 130:1387-1389 (November 20) 1959.

The reoviruses, a new group of cytopathogenic viruses made up of the former ECHO type 10 virus and of others antigenically related to it, are distinct in their properties from all other known viruses. The optimum medium for their isolation is monkey-kidney tissue culture. They have been recovered from human beings, chimpanzees, monkeys, and calves, and serologic data suggest that guinea pigs, rabbits, dogs, and cats may also be naturally infected.

Their size of approximately 72 μ, as measured by gradocol membrane filtration, is somewhat smaller than that of the myxoviruses, the adenoviruses, and the CCA (chimpanzee corysa agent) or RS (respiratory syncytial) virus (23) and distinctly larger than the enteroviruses.

The reoviruses are ether-resistant, like the adenoviruses, with which they share an affinity for both the respiratory and the enteric tracts, and unlike the myxoviruses and the RS virus, which have an affinity predominantly for the respiratory tract and are readily destroyed by ether. The cytoplasmic inclusion produced by the reoviruses is distinctive. The great sensitivity of the reovirus, human group O hemagglutinin to destruction by periodate and its resistance to RDE is another distinctive property.

The capacity of all reoviruses to multiply in newborn mice, with the production, by large doses of some strains, of clinical manifestations and lesions in the brain, myocardium, liver, and pancreas similar to those produced by the Coxsackie B viruses, at first suggested a possible relationship to this group of viruses (10, 12), but many other properties, most particularly their large size, clearly distinguish the reoviruses from the Coxsackie viruses (24).

The association of various reoviruses with respiratory and enteric illness in human beings, chimpanzees, and monkeys points to the necessity of including the reoviruses in any systematic study of the complex viral etiology of respiratory and enteric diseases of human beings. The capacity of reoviruses to produce lesions in the brain, liver, and myocardium of newborn mice also points to the need for considering them as a potential cause of similar lesions in reovirus infections of newborn children.

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Lifts depression... as it calms anxiety!

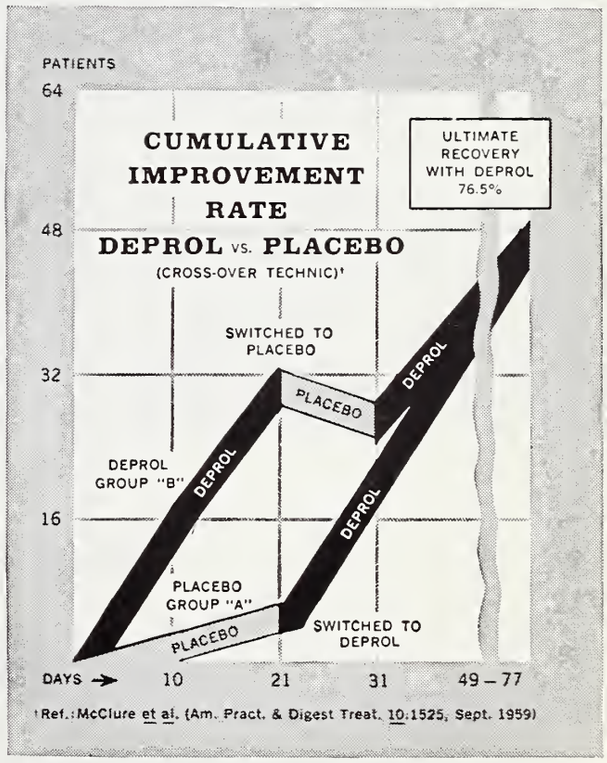
Smooth, balanced action lifts depression as it calms anxiety...rapidly and safely

Balances the mood — no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient — *they often aggravate anxiety and tension.* And although amphetamine-barbiturate combinations may counteract excessive stimulation — *they often deepen depression.*

In contrast to such "seesaw" effects, Deprol lifts depression as it calms anxiety — both at the same time.

Acts swiftly — the patient often feels better, sleeps better, within two or three days. Unlike the delayed action of most other antidepressant drugs, which may take two to six weeks to bring results, Deprol relieves the patient quickly — often within two or three days.

Acts safely — no danger of liver damage. Deprol does not produce liver damage, hypotension, psychotic reactions or changes in sexual function — frequently reported with other antidepressant drugs.



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Old Journals Fight Cold War

Dr. Charles B. Daugherty of Jeannette, Pa., is doing his bit to fight the cold war.

Under his direction, American physicians have begun sending their old medical journals to physicians in foreign lands instead of letting them go to waste. The semi-retired otolaryngologist feels this will help deter the spread of communism.

"Doctors in some of these situations are the only literate persons in their communities and have great influence," he said. "If we can get an individual doctor to say 'America is good,' the whole community will say 'America is good.' "

Physicians in many parts of the world lack current medical literature and since English has largely replaced German as the medical language of the world, American physicians with their vast amount of such literature are in a position to make a contribution to foreign medicine for the cost of re-mailing old journals. After nine months, 65 American physicians are mailing journals to 83 of their counterparts overseas. Dr. Daugherty has access to the addresses of 250,000 foreign physicians and hopes to expand the program, called "Colleagues Everywhere." At present, he personally is handling requests for the addresses of foreign physicians.

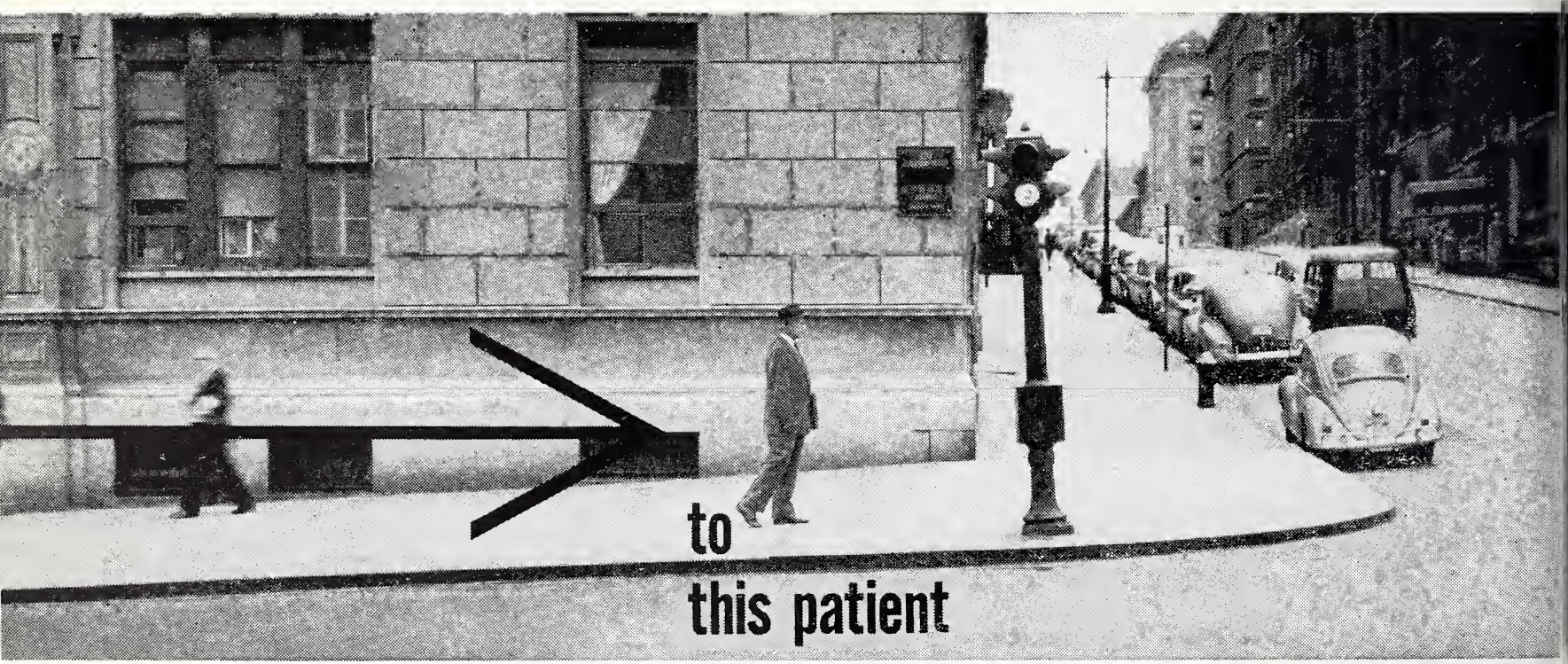
AMA Labeling Bill To Face House

The American Medical Association's "Uniform Hazardous Substances Act" (H.R. 7352) will be considered by the U. S. House of Representatives this spring. The bill, designed to prevent poisoning accidents, requires proper labeling and listing of contents on household, commercial, and industrial products.

To elicit public support for H.R. 7352, the A.M.A. Committee on Toxicology has prepared a card pointing out the need for such legislation and giving first aid instructions for poisoning.

The committee reports that there are as many as a quarter of a million trade-name products in America today. It warns, "Without proper labeling these products are particularly dangerous to the members of your family at home and at work."

First-aid cards and an explanatory booklet, "Hidden Hazards With Unlabelled Chemicals," now being printed, may be secured from the committee.



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Dental Symposium Slated for May

"Nutrition in Tooth Formation and Dental Caries" will be the subject of the eighth symposium to be sponsored by the American Medical Association's Council on Foods and Nutrition. Co-sponsors are the Harvard School of Dental Medicine, the Massachusetts Medical Society, and the Massachusetts Dental Society.

The symposium will be held May 19 in the Statler Hotel, Boston, as part of the annual meeting of the Massachusetts Medical Society. It is open to physicians, dentists, nurses, dietitians, and medical and dental students.

John B. McDonald, D.D.S., M.S., Ph.D., professor, Harvard School of Dental Medicine and director, Forsythe Dental Infirmary, will be chairman of the meeting.

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AHA Grants $2 Million In Fellowship Awards

The American Heart Association has awarded almost $2 million for cardiovascular research studies during the 1960-61 fiscal year. AHA's National Research Committee recently granted $1,920,485 in fellowships to 187 scientists. The awards are the first to be made from $3,500,000 set aside for research purposes. The balance will be allocated as grants-in-aid.

The fellowship awards provide for the continuation of the AHA's seven lifetime career investigatorships. Also included were awards to 82 established investigators, 16 established investigator-grantees, 48 advanced research fellows, and 34 research fellows.

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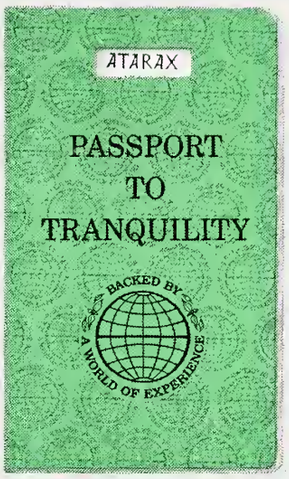

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IN HYPEREMOTIVE ADULTS does not impair mental acuity	"... especially well-suited for ambulatory neurotics who must work, drive a car, or operate machinery." Ayd, F. J., Jr.: New York J. Med. **57**:1742 (May 15) 1957.	Garber, R. C., Jr.: J. Florida M. A. **45**:549 (Nov.) 1958. Menger, H. C.: New York J. Med. **58**:1684 (May 15) 1958. Farah, L.: Internat. Rec. Med. **169**:379 (June) 1956.

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Preferably, antibiotic therapy should be based on pretreatment culture of the offending pathogen, but in bacterial pneumonia the problem may well be too pressing to permit the required delay of 24 to 48 hours. A differential diagnosis among bacterial pneumonias, based on such clinical grounds as speed of onset, sepsis and pain may guide the choice of antibiotic for initiation of therapy.

Should clinical judgment dictate that antibiotic therapy be started immediately, at the same time a sputum sample or a subglottic swab can be sent to the laboratory for culture and sensitivity studies. If the response to the first antimicrobial agent proves unsatisfactory, a reasonable basis for changing therapy will then be at hand.

Choosing the Antibiotic

Since therapy must be started at once for bacterial pneumonia, it is advisable to choose a broad-spectrum antibiotic that quickly produces high levels of active agent (e.g., tetracycline phosphate complex, TETREX). Such an antibiotic probably has the best chance of controlling the pathogen, whether it be gram-negative or gram-positive. And if the laboratory report shows that the invading organism is much less sensitive to tetracycline than to other agents, the patient can then be changed to an appropriate antibiotic. If the difference in sensitivity is slight, then the possibility of side effects, sensitization, and toxicity should be evaluated before changing therapy to another antibiotic.

The greatest number of bacterial pneumonias are caused by pneumococci, which respond very well to penicillin, tetracycline, and chloramphenicol. Also, these antibiotics are usually effective against the other gram-positive coccal pneumonias. But penicillin is ineffective against the viral pneumonias and the gram-negative *Hemophilus influenzae* and *Klebsiella pneumoniae*. Although *K. pneumoniae* causes only about 1 to 2 per cent of pneumonia cases on the average,[1] these are apt to be acute and fulminating (Friedländer's pneumonia), with a high mortality rate if not effectively treated. Since pneumococcal pneumonia may be difficult to distinguish clinically from Friedländer's, except by gram-stained sputum smear, it may be wiser to start treatment with an agent also effective against Klebsiella.

Penicillin, however, in addition to having a limited spectrum, also causes many minor and some serious sensitivity reactions. In a recent survey[2] it was found that penicillin produced severe skin reaction. But most important was the observation that anaphylactic shock, with a fatality rate of about 9 per cent, was the most frequent serious reaction. Such severe reactions are almost always associated with parenteral administration.

Tetracycline is also clinically effective in primary atypical pneumonia.[3]

The tetracyclines (e.g., TETREX) have the advantage of a broad range of antimicrobial activity and low toxicity. And in addition, the physician does not have to trouble himself or his patients with repeated blood studies when he prescribes TETREX. Minor reactions such as gastric upsets or mild skin rashes occur occasionally. The most serious side effects are staphylococcal and monilial overgrowth, but these are rare and can be adequately controlled.

No one would deny that appropriate antibiotic therapy has greatly reduced morbidity and saved many lives of patients with bacterial pneumonia. Nevertheless, general supportive measures in the care of patients remain important even today. Especially in the desperately ill patient, antibiotics are not considered as substitutes for the individual evaluation, clinical observation and judgment of the physician.

Some Micro-organisms Susceptible[a] to Tetracycline (TETREX)[b]

Streptococcus; Staphylococcus; Pneumococcus; Gonococcus; Meningococcus; *C. diphtheriae; B. anthracis; E. coli;* Proteus; *A. aerogenes; Ps. aeruginosa; K. pneumoniae;* Shigella; Brucella; *P. tularensis; H. influenzae; T. pallidum;* Rickettsiae; Viruses of psittacosis and ornithosis, lymphogranuloma inguinale, primary atypical pneumonia; *E. histolytica; D. granulomatosis.*

a Some strains are not susceptible.

b Table adapted from Goodman, L. S., and Gilman, A.: The Pharmaceutical Basis of Therapeutics. 2nd edition, New York, The Macmillan Co., 1956, pp. 1322-1323.

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JOURNAL of the Mississippi STATE MEDICAL ASSOCIATION

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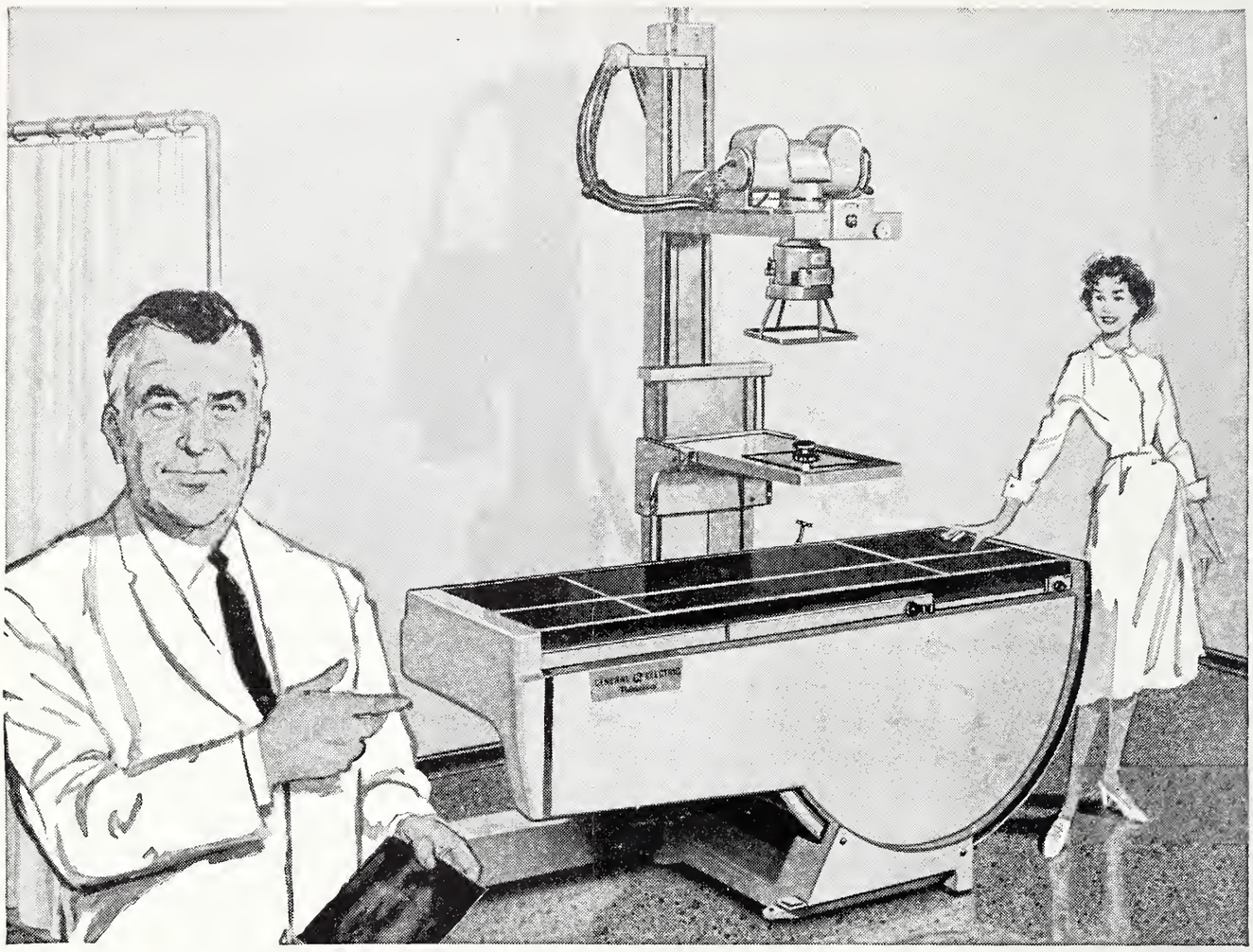

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NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

May 1960

Dear Doctor

Aime J. Forand, Rhode Island labor-liberal who carved his niche in history the hard way, won't seek reelection to the 87th Congress. Rumor has it that the 64 year old solon is quitting politics for good and is not expected to try again for elective office.

> The little state's other representative, John E. Fogarty, a lesser name in wrong-way health legislation, may run for governor. Another story has it that he'll try for Theodore Green's senate seat which is up for grabs. Only certain aspect of Rhode Island politics is that liberals will stay in saddle.

Medical Economics April 11 issue says medical association-sponsored Keogh retirement plans may be disappointing to physicians. Chief criticism of article by M. J. Goldberg is that doctors would still pay going high commissions on acquiring trust holdings. What Medical Economics obviously doesn't know is that MSMA is in process of announcing bank-managed trust plan involving no commission or acquisition costs and management fees as much as 80% less than mutual funds.

The 85 U.S. medical schools received $1.2 million last month from the American Medical Education Foundation, according to Dr. George F. Lull, AMEF president. Grants represent 1959 campaign proceeds and bring AMEF gifts to schools to almost $10 million in a decade. Vanderbilt topped list with $53,000 allocation while University of Mississippi got about $7,000.

Latest controlled circulation (throwaway) medical publication is Factor, monthly tabloid newspaper, devoted to emotional and related aspects of medical practice. Published independently by Professional News Bureau, Inc., New York, the paper offers conservative format and ethical advertising. First few issues show sound editing and good taste.

Last call for MSMA's 92nd Annual Session, less than two weeks away, when the Mississippi medical spotlight shifts to Jackson. The co-headquarters hotels, the Heidelberg and King Edward, report heavy advance reservations. Many physicians plan early arrivals to catch dozen or so Monday, May 9, specialty society and alumni meetings.

Sincerely,

Rowland B. Kennedy
Executive Secretary

Lawmakers Seek $13.5 Million For State Hospitals, Indigent Care

Jackson - Medical care for the indigent was getting attention from two approaches as the 15th week of the regular session of the Legislature ended. Mississippi Hospital Association is seeking $17.50 reimbursement per day for charity patients or 75% of costs, whichever is the lesser, with counties mandatorily paying half. MSMA supports a 66% increase in present across-the-board per diem to $10 per day. House Appropriations Committee asked solons for $1.5 million for program and almost $2 million for the four charity hospitals. University hospital will get $3 million and Mississippi State Hospital at Whitfield, $7 million.

New Cancer Cytology Foundation Seeks Physician Support

New York - A new organization said to be comprised of New York and Miami physicians calling itself the Cancer Cytology Foundation of America is making a pitch for a network of cytologic screening centers and soliciting $10 for a cervical smear kit. American Cancer Society says kit appears to be same outfit sold for $.40 in Mississippi where three screening centers are already in operation under MSMA, ACS, Mississippi Ob-Gyn Society, and pathologists' sponsorship. As with all new organizations, physicians are advised to look before leaping.

Forand Bill Confusion Has Capital Dizzy As Care-For-Aged Push Continues

Washington - Most confused, uncertain issue before present session of Congress is Forand Bill with both Democrats and Republicans trying to get in the act. Chronology of events in last 30 days saw House Ways and Means Committee vote 17-8 against bill, a Republican "substitute" talked up with Nixon's backing, and House Speaker Sam Rayburn hop on the pro-Forand bandwagon, where, some observers say, he has been all along. Only President Eisenhower remains firmly against Forand-type legislation. Major Democratic presidential aspirants - Kennedy, Humphrey, and Symington - are solid supporters of federal medical care schemes. Recent statements by Nixon indicate he will support some version of Forand-type legislation.

Staphylococcus Infection Suits Against Hospitals Post New Threat

Denver - Presbyterian Hospital of Colorado is defendant in a $300,000 malpractice suit brought by a former patient who says he sustained permanent injury from a staph infection. Allegation states that the infection was contracted postoperatively because of "...negligence by the hospital by failing to maintain it in a sterile condition." A similar suit in Memphis recently resulted in a $25,000 judgment for the plaintiff but motions for a new trial have been filed by both sides. Legal observers say findings for plaintiffs in the pending litigations might bring new liability problems to hospitals. Whether staph infection occurs or not isn't at issue - it's whether the hospital was "negligent."

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
May 1960, Vol. I, No. 5

ORIGINAL PAPERS

A Practical Guide To Fluid Therapy in Burns

CURTIS P. ARTZ, M.D.
Jackson, Mississippi

Burn injury results in an imbalance of fluids in the body leading to a diminution of the circulating blood volume and a possibility of "burn shock." Proteins, electrolytes, and water pass from the plasma into the interstitial space. Additional fluid is lost as exudate into blisters and from the weeping surface of partial-thickness burns. The author discusses evaluation of fluid loss in burn injury, methods and extent of fluid administration, and plans of therapy. He concludes this practical guide with a review of follow-up studies.

THE PRIMARY DERANGEMENT after burn injury is loss of fluid from the intravascular compartment brought about by vasodilatation and increased capillary permeability. This loss of fluid leads to a diminution of the circulating blood volume and thereby the threat of so-called "burn shock." The amount of fluid lost varies with the extensiveness of the burn. Some fluid passes into the interstitial space, as is evidenced by edema formation. Additional fluid is lost as exudate into blisters and from the weeping surface of partial-thickness burns.

Proteins, electrolytes, and water pass from the plasma into the interstitial space immediately after the burn (Fig. 1). Colloid, electrolyte solution, and water must be given to maintain an adequate circulating blood volume and thus prevent hypotension. Some of this replacement therapy passes through the damaged capillary walls into the interstitial space, giving the patient an expanded interstitial space and thereby a combined load of water and sodium (Fig. 1). This load slowly increases as treatment is being given until about 48 hours after the burn. At that time capillary permeability diminishes and fluid redistribution begins. Water and sodium are reabsorbed into the vascular system, and the interstitial space decreases. Excess sodium and water are excreted by the kidneys. In extensive burns it may take several days for this expanded interstitial space to return to normal.

The loss of red blood cells following burns has been studied extensively.[1, 2] There is a loss of red blood cells after a deep burn because:

1. Many cells in the burned area are destroyed directly by heat.
2. Delayed hemolysis occurs for 24 to 48 hours after burning.
3. Thrombosis occurs in the capillaries beneath the burned tissue and causes a decrease in the red cell mass.
4. Many red blood cells are lost following sludging of blood.

From the Department of Surgery, University of Mississippi School of Medicine.

From a clinical standpoint it can be assumed that 10 per cent to 15 per cent of the red cell mass is destroyed in any appreciable third degree burn.

The desirability in initial therapy is to provide enough colloid, electrolyte solution, and water to maintain an adequate plasma volume without giving excessive replacement therapy that may overexpand the interstitial space.

INITIAL EVALUATION

Unlike most patients who suffer shock, burned patients have predictable losses. The size of the patient and the extent of the burn permit an estimation of the amount and rate of fluid loss. The aim in initial management is to estimate this fluid loss and replace it as it is being lost, thereby preventing hypotension.

Several methods have been devised for estimating the extent or percentage of body surface burned. The most common method is the familiar "Rule of Nines."[3] This formula is easily remembered and very convenient, but it is not as accurate as the use of a Lund and Browder Chart (Fig. 2).[4] Every hospital should have a Lund and Browder Chart on a record sheet available for use in the emergency room. By marking the burned area on this chart, one is able to estimate rather accurately the percentage of body surface burned.

At the same time that the percentage of burned area is being determined, an attempt should be made to estimate the relative amounts of second and third degree injury. Although the total volume of fluid required is about the same for second degree as for third degree injury, the type of fluid given is somewhat different. Patients who have primarily second degree burns can be adequately resuscitated with plasma, or a plasma volume expander, and electrolyte solutions. Patients who have appreciable amounts of third degree injury require additional whole blood.

METHODS OF INTRAVENOUS ADMINISTRATION

Since the life of a burned patient depends on the infusion of replacement therapy, it is wise to plan initially the utilization of various routes of administration. In the extensively burned patient intravenous fluid is often required for 10 to 12 days. During this time phlebitis and thrombosis may occur in several veins necessitating a change in infusion site from one vein to the other. Good veins for intravenous infusion may be difficult to find; therefore a plan for saving veins should be worked out before therapy is instituted.

As soon as the patient is admitted, a large gauge needle should be placed into any accessible vein and blood drawn for cross matching and a base-line hematocrit determination. An infusion of Dextran or lactated Ringer's (Hartmann's) solution should be started through the same needle. This will permit infusion of fluids until there is time to sit down and plan the steps in therapy.

If it is determined that prolonged intravenous therapy will be necessary, a cut-down must be performed. The cut-down cannula is inserted into a vein of any available extremity as distal as is practical. If thrombosis of the vein occurs, then the cannula can be moved proximally. If there is a burn of the upper portion of the body, the cut-down should be inserted into an ankle vein. If phlebitis occurs, this can be changed to the opposite ankle vein or an upper extremity vein if available. Should thrombosis occur in this area, a vein higher on the leg can be cannulated, and eventually a femoral catheter may be necessary. The use of a percutaneous plastic femoral catheter is very advantageous; however, this method of in-

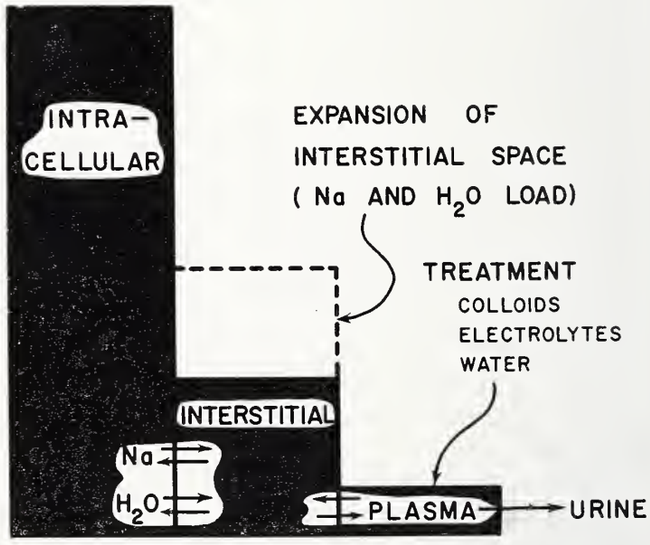


Figure 1. Diagram of body water compartment changes after burns. Soon after the injury, plasma passes into the interstitial space. Treatment with colloid, electrolytes, and water maintain the plasma volume but water and sodium continue to flow into the interstitial space. This expands the interstitial space as is shown by the dotted line. The increased amount of sodium and water in this interstitial space means that the patient has a combined load of sodium and water. This remains until redistribution of fluid occurs. There is an interchange of sodium and water between the intracellular compartment and the interstitial space, but this is not well defined. After the third day the interstitial space decreases in size, and water is usually excreted faster than sodium.

travenous administration should be saved as a last resort. If thrombosis occurs in the femoral or iliac vein, then the other veins of that extremity will not be suitable for use. The femoral catheter should not be left in place for more than seven days because of the fear of thrombosis and possibly embolism. In very extensively burned patients, particularly when all four extremities are injured, it may be necessary to give infusions initially by way of a femoral catheter. When this occurs, the catheter should be inserted in one side and allowed to remain for seven days, then moved to the other side.

THE AMOUNT OF FLUID THERAPY

As soon as the initial procedures in the care of the patient and the assessment of injury are made, the amount and type of fluid therapy should be planned. Several factors influence the plan:

1. Extent and depth of burn
2. Weight of patient
3. Presence of respiratory irritation
4. Age of patient
5. General physical status of patient.

By the use of a fluid formula it is possible to estimate from the weight of the patient and the extent of body surface burned the approximate fluid requirements for the first 48 hours. In the patient who has inhaled noxious gases there is the danger of pulmonary edema, and therefore, somewhat less than the usual estimated amount of fluid therapy should be given. Likewise, elderly patients and patients with severe cardiovascular disease should be given minimal replacement therapy.

Usually intravenous fluids are required only in burns of more than 20 per cent of the body surface. Occasionally, burns that are primarily full thickness or burns in children, although less than 20 per cent, may require intravenous therapy. Most minor burns, however, can be treated by oral fluids. A salt and soda solution provides the most satisfactory method of replacement. This solution is prepared by dissolving 3 gm. of salt (½ teaspoonful) and 1.5 gm. of bicarbonate of soda (½ teaspoonful) in a quart of water. This solution is tolerated better when given cold and flavored with lemon. It is a hypotonic solution with approximately 70 mEq. of sodium per liter. If vomiting occurs with oral electrolyte solution, then lactated Ringer's may be given intravenously in amounts of 2 cc. per kilogram for each per cent of burn.

In the more severely burned patient well planned and well regulated intravenous therapy is required. Many patients with such extensive burns that there is little chance of ultimate survival live for several days. If therapy is to be successful, advantage must be taken of the more or less predictable volume and rate of fluid losses. In this respect the physician has a therapeutic opportunity that is rarely encountered in other diseases characterized by disturbed water and electrolyte distribution. If judicious treatment is instituted within a few hours after injury, signs and symptoms of derangement can frequently be prevented. Because the volume and rate of fluid losses are predictable, several fluid formulas for estimating the amount and type of therapy have been devised. All seem to have merit. The Brooke formula has proved to be most successful in a very extensive experience.[5] This formula calls for the following fluids in the first 24 hours after injury:

1. Colloid (blood, Dextran or plasma)—0.5 cc. per kilogram per per cent of body surface burned
2. Electrolyte solution (lactated Ringer's)—1.5 cc. per kilogram per per cent of body surface burned
3. Water requirement (dextrose in water) Adults —2,000 cc.

Water requirements in children vary. The following is a rough guide to daily water requirements in infants and children:

1. During the first two years—120 cc. per kilogram
2. Second to fifth year—100 cc. per kilogram
3. Fifth to eighth year—80 cc. per kilogram
4. Eighth to twelfth year—50 cc. per kilogram

Burns of more than 50 per cent of the body surface should be calculated as 50 per cent burns.

The above formula is only an estimate of fluid requirements, which allows a plan of therapy. The exact amounts of fluids given should be in accordance with the response of the patient. It is usually anticipated that ½ of the above fluid requirements should be given in the first 8 hours, ¼ in the second 8 hours, and ¼ in the third 8 hours. This rate of administration is based on the fact that fluid losses early after the burn are more rapid than later.

INFLUENCE OF BURN DEPTH

The depth of burn influences the type of fluid therapy, particularly in the colloid requirement. Second degree burns up to 40 per cent of the body surface will do well if the colloid requirement is met by the use of Dextran or plasma. Burns that have an appreciable amount of third degree injury should be given the colloid requirement as half Dextran and half whole blood. The protein content of plasma would favor it as a therapeutic tool; however, it is considerably more expensive and virus-free plasma is not as readily

available as is Dextran. Most clinicians, therefore, prefer Dextran to plasma as initial colloid therapy.

Physiologic saline solution is used extensively as an electrolyte requirement. It is inexpensive and readily available. Its chief drawback is the excessively high concentration of the chloride ion. Burned patients have a tendency toward metabolic acidosis, and massive infusions of physiologic saline solution are followed by hyperchloremia, which tends to enhance the acidosis. A balanced electrolyte solution, such as lactated Ringer's, is more acceptable. When lactated Ringer's is not available, a satisfactory electrolyte solution containing 159 mEq. of sodium and 103 mEq. of chloride per liter can be prepared by mixing physiologic saline solution and 1/6 molar lactate solution in proportions of two volumes of saline to one volume of 1/6 molar lactate.

In some patients the water requirement may be given orally. Most severely burned patients, however, develop a paralytic ileus early, and vomiting may result. It is usually safer to withhold all fluids in a seriously burned patient and give the entire water requirement during the first 24 or 48 hours by the intravenous route.

THE PLAN OF THERAPY

As soon as the plan of fluid therapy has been determined, it should be written down, but it is expected that it will be changed. As Dr. Francis Moore has so aptly put it, "Planning fluid therapy in the early burn is like a family budget. It is made to be broken."[5] As the plan is followed, the actual amount administered is dictated by the clinical response of the patient. It is foolhardy to think that fluids can be estimated and ordered on a 24 hour basis. There is no substitute for hourly observation. The type of therapy and rate of infusion must be changed frequently in accordance with the patient's response.

To follow the fluid therapy adequately in a burn of more than 25 per cent of the body surface, it is absolutely mandatory that an indwelling catheter be placed in the bladder so that the hourly output of urine can be measured. It should be removed, however, as soon as possible, or urinary tract infection may develop. After the initial cutdown has been performed, and an adequate amount of plasma volume expander, blood, or lactated Ringer's has been given, attention should be directed toward local care. Anesthesia is unnecessary and contraindicated. As soon as the local burned wound has been treated and the patient has been taken to the ward, a plan for following fluid therapy should be outlined. If several physicians are assisting with the care of the patient, one should be delegated as having the primary responsibility of writing orders and determining the speed and type of fluid administration. A chart should be prepared to record hourly urinary output, blood pressure, and intravenous infusions.

FLUID FORMULA

In general most of the colloid requirements should be given early. This will help in maintaining an adequate plasma volume and prevent hypotension. If the patient has had no fluid therapy for several hours between the time he is burned and the time of admission, very energetic colloid and fluid therapy may be necessary. In very severe burns there may be no urinary output for a few hours. During this time energetic colloid and electrolyte therapy should be given. Once the urine has started to flow, it can be assumed that the intake is catching up with the losses from the vascular tree. After observing the urinary output for a few hours, a good estimate of the rate of infusion can be made.

The chief value of the estimated fluid requirements by the use of a formula is that it allows knowledge of the ratio of colloid to electrolytes to dextrose and water. As the response of the burned patient is determined, a fall in blood pressure with fall in urinary output means additional colloid therapy. A fall in urinary output with a stable blood pressure means that additional electrolyte solution or water is required.

The patient's response must be re-evaluated every hour or two and fluid intake regulated. After 8 to 12 hours it may be possible to predict what will be necessary in the way of intake, and observation then can be less frequent.

EXCESSIVE INTAKE

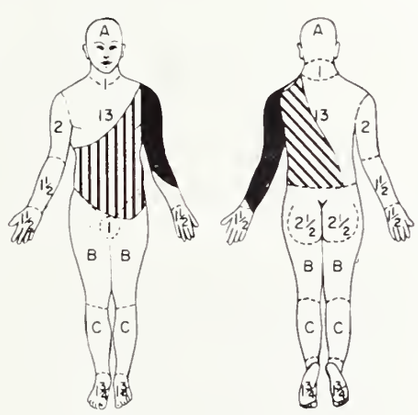
One of the great dangers that occur in early fluid therapy of burns is excessive intake. It is not uncommon for a physician to assume that 30 cc. per hour urinary output is good, but 50 to 100 cc. is better. This is a dangerous fallacy. The aim in early fluid administration is to give the least possible amount that will assure a plasma volume sufficient to maintain a pressure in the glomeruli adequate for the output of urine. Additional fluid therapy leads only to added expansion of the interstitial space. Excess water and electrolytes in amounts that will produce a urinary output of 50 cc. or more per hour will lead to overexpansion of the interstitial space. This means an increased load of sodium and water. A urinary output of 15 cc. per hour is an indication for more

rapid therapy, and an output of 50 cc. per hour should be followed by a reduction in rate of administration.

In infants, elderly patients, and patients with hypertensive vascular disease or irritation of the respiratory tract, the urinary output should be kept at 10 to 15 cc. per hour. In modern day treatment of burns excessive fluid therapy is a more common error than inadequate fluid therapy. Restlessness is usually a sign of inadequate therapy. In almost all burned patients there is a tremendous thirst which disappears in the well hydrated patient in 12-18 hours.

At times when the blood pressure is normal, additional colloid therapy may not result in a satisfactory output of urine. When such an event occurs, colloid therapy should be discontinued and electrolyte solutions or water given. By following the urinary output and the blood pressure, one is able to determine whether the change in urinary output is due to a lack of fluid, specifically water, or due to a diminished plasma volume with an inadequate flow to the renal glomeruli.

UNIVERSITY HOSPITAL
Jackson, Mississippi
BURN CHART



Relative Percentage of Areas Affected by Growth

Age	Age in Years					
	0	1	5	10	15	ADULT
A – ½ of head	9½	8½	6½	5½	4½	3½
B – ½ of one thigh	2¾	3¼	4	4¼	4½	4¾
C – ½ of one leg	2½	2½	2¾	3	3¼	3½

Total Percent Burned 16 2° + 6 3° = 22 %

Figure 2. Typical hospital sheet with Lund and Browder chart. On this sheet is sketched the second degree (vertical lines) and third degree (solid black) areas of burn injury. This is the most accurate method of determining percentage of body surface burned.

In patients with burns of the head occasional cerebral edema may occur during the course of treatment. This phenomenon is more common in children. To prevent this disastrous complication it is necessary to follow the temperature carefully during the first 48 hours. An unusual temperature rise to 104° in a well-hydrated patient may mean the beginning of cerebral edema. The eye grounds should be observed, and if there is any evidence of edema, the infusion of fluids should be decreased immediately. The mechanism of formation of cerebral edema in burned patients has not been explained.

THE SECOND 24 HOURS

During the second 24 hours, the patient will require the same amount of water and about one-half the colloid and electrolyte requirements of the first 24 hours. Laboratory determinations during this period are of little value and are unnecessary. During the second 24 hour period, the ratio of colloid, electrolyte solution, and water should be calculated and administered according to the urinary output.

At 48 hours wound edema is maximal and at this time fluid redistribution occurs. Usually water and sodium return to the vascular system and the urinary output increases. In moderate burns the patient will regulate his fluid needs by oral intake. In more extensive burns some of the fluid requirement may be taken orally and the remainder intravenously in accordance with the urinary output and the serum sodium concentration. In the very extensively burned patient it may be necessary to continue fluid by the intravenous route for several days.

THERAPY AFTER 48 HOURS

After 48 hours the laboratory may be quite helpful in determining therapy. Careful observation should be made of the hematocrit and the serum sodium. If the hematocrit falls below 45, blood should be given. Hyponatremia is usually present in spite of a large sodium load in the interstitial space. A low serum sodium in injured patients, particularly in burn patients, is associated with a good clinical response and is desirable. The insensible water loss may be quite marked, up to 5,000 cc. a day in an adult. After the acute stress of the burn injury the body has a tendency to hold on to sodium, and very little is excreted by the kidneys. The loss of water by the insensible route and by the urine may be considerably greater than the loss of sodium. This means that the water load is diminishing more rapidly than the

sodium load, and therefore a rise in serum sodium may occur. A serum sodium of 145 mEq. per liter or more is an indication for additional water. When insufficient water is given, the serum sodium may give rise to a hypernatremia.[7] The increased concentration of sodium in the interstitial space leads to intracellular dehydration and sometimes death. Daily serum sodium determinations, therefore, are very important in the extensively burned patient, and water should be given to prevent hypernatremia.

After the first 72 hours potassium may be required. When the patient can take nourishing fluids and food orally, intravenous potassium therapy is unnecessary. In the more severely injured patient it may be necessary to give 80 mEq. of potassium a day by the intravenous route until the potassium requirement can be met by oral intake. Later in the postburn period intravenous therapy is required to maintain an adequate red cell mass and in some instances for additional protein therapy. When the patient is unable to take adequate proteins and calories orally, some type of intravenous protein, such as protein hydrolysate or plasma, may be necessary as a supplement. The hematocrit should be determined twice weekly, and an adequate amount of blood given to maintain a hematocrit of 45 or above in the well-hydrated patient. ★★★

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'FOR THOSE WHO CAN'T BRUSH AFTER KISSING . . .'

Our dental colleagues are putting the bite on kissing, says Cowles Insiders Newsletter, because a new report from the National Institute of Dental Research indicates that tooth decay is infectious and can be transmitted from one individual to another. Dr. Robert Fitzgerald, chief of the institute's gnotobiotic section of the microbiology laboratory, and an associate report isolating and identifying five streptococcus strains said to cause tooth decay in hamsters. Oral injection of a cavity resistant hamster with microbes from the decaying molar of another caused caries in the healthy animal.

Further, it's "look, Ma, cavities," because mother hamsters with tooth decay can transmit the condition to offspring. The researchers concluded that while bacteria which infests hamsters may differ from those strains affecting man, comparative studies may be useful in helping to prevent dental caries.

The Problem of Cerebral Palsy in Mississippi

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Mississippi taxpayers are now providing active care for 1,543 cerebral palsy patients under the Crippled Children's program. In this paper Dr. Caden discusses the viewpoints and policies of the Mississippi Hospital-School for Cerebral Palsy. Multiple handicaps associated with cerebral palsy are reviewed, and the incidence of mental retardation is considered. The latter half of the paper is devoted to a discussion of cerebral palsy classification.

CEREBRAL PALSY IS a long term, non-curable, nonfatal neurophysical and neuropsychological disorder that has its origin in defective global brain structures and is invariably related to anoxia.

The instance of cerebral palsy is expressed in various ways and is the largest diagnostic group to receive care under the Mississippi Crippled Children's program. According to the United Cerebral Palsy Association, there are 550,000 cerebral palsy patients in the United States. In Mississippi there are 1,543 cerebral palsy patients on the active registry of the Crippled Children's program. The active registry lists 14,490 patients in all categories of crippling conditions; thus, cerebral palsy constitutes 10.6 per cent of the entire Crippled Children's program.

In the United States there is one C. P. born per every 215 live births according to Dr. W. N. Phelps, or one in every 200 live births according to Dr. M. A. Perlstein, or one in every 500 live births in Norway. Dr. Phelps states there are seven C. P. children born per 100,000 population per year.[1] Of these seven children, one will die before the age of six, two will have minimal involvement and need outpatient care, two will be moderately involved and need inpatient type care, and the other two will be hopelessly involved and need home nursing or state custodial care.

If these data are related to the Mississippi population of 2,000,000, there would be a prevalence up to the age of 21 of 1,680 children in the state eligible for Crippled Children's program provided they were indigent. We now have 1,543 C. P.'s on the active registry, and this does not include those on the inactive registry and those under private or no medical care. One can only conclude that the instance of cerebral palsy in Mississippi appears to be much higher than reported.

Read before the regular meeting of the Central Medical Society, March 1, 1960.
From the professional staff, Mississippi Hospital-School for Cerebral Palsy.

The majority of these children have multiple handicaps in addition to the obvious motor impairment. In a study of 1,265 C. P.'s by Hopkins, 29.2 per cent had seizures.[2] According to Perlstein, in a study of 1,000 C. P.'s, 50 per cent of the spastics had seizures.[3] Seizures in the general population are less than one half of 1 per cent. Defective vision is present in 50 per cent. Defective hearing is present in 25 per cent, and defective speech is present in 68 per cent. According to Kenny, 74 per cent of these children have significant sensory deficit particularly in astereognosis, two point discrimination, and position sense.[4] Personality maladjustments are present in 75 per cent. Sixty per cent of these children are significantly mentally retarded.

Mental retardation is highly prevalent in the cerebral palsy population. (Fig. 1.) In a study of 1,003 consecutive cases at the North Carolina Cerebral Palsy Hospital, Dr. L. B. Hohman found that 58.8 per cent had significant mental retardation.[5] A close breakdown showed that 58.8 per cent had IQ's below 70; 25.1 per cent had IQ's between 70 and 90; 13 per cent had IQ's between 90 and 110 and only 3.1 per cent had IQ's over 110. It is generally concluded that modified and prorated standardized IQ tests are satisfactory tools in testing the greater majority of C. P.'s. In the

past, the pioneers in the field of cerebral palsy had a tendency to become emotionally attached to their pet fields and developed numerous tests to bring out intelligence that was not present.

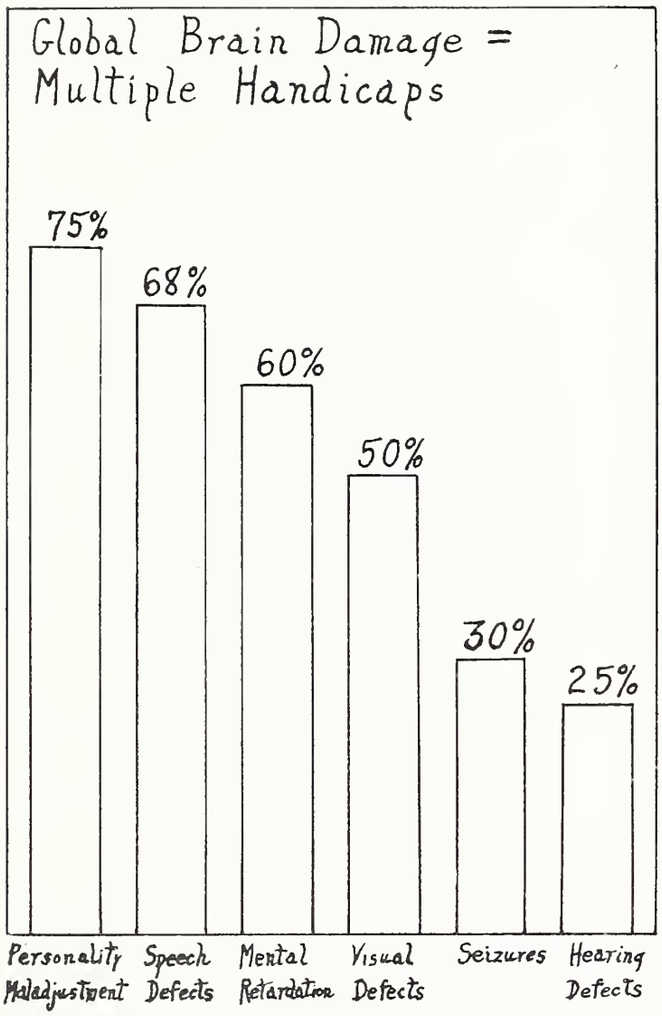

Figure 1. Comparison of handicaps in cerebral palsy.

This resulted in an unrealistic approach toward education in cerebral palsy and overlooked the maxim that intelligence and knowledge are useful only if they can get out of the brain and find some useable expression. Dr. George Deever's famous quotation "Nobody will pay you for what's in your head; they will only pay you for what comes out" is very appropriate here. Ignoring the physical handicap entirely, only three out of one hundred children would be considered college material.

As stewards of the state's tax money, the Hospital School professional staff has tried to select children carefully and bring in those who are educable or treatable from a physical standpoint. (Fig. 2.) This is reflected in the 70 patients treated at the Hospital School last year. Only 41 per cent of children had IQ's below 70 and 15 per cent had IQ's above 110. This is well above the average intelligence of the cerebral palsy population and shows the selection of those children most amenable from an educational standpoint and also from a physical or surgical standpoint.

In order to map out a logical treatment program for these children with realistic goals, it is imperative to classify them. (Fig. 3.) This is necessary because the treatment of various types is frequently quite different. For instance, the spastic generally has fairly good hands, can use crutches, develops contractures easily, and tolerates surgery well. The athetoid generally has poor hands, is hampered by crutches, develops no contractures, and tolerates surgery poorly.

Dr. Perlstein's classifications are used at the Hospital School. (Table I.) There are five major sub-heads. The first is the classification based on temporal etiology and is subdivided into congenital and acquired. Congenital includes the period of time from conception until the time of birth; the acquired period is from the time of birth until maturity.

TABLE I
CLASSIFICATION OF CEREBRAL PALSY

I. Age of Onset
- A. Congenital
- B. Acquired

II. Type of Neuromotor disorder
- A. Spastic Cerebral Palsy
- B. Dyskinesias
  - 1. Choreas
  - 2. Athetoid
  - 3. Dystonia
  - 4. Rigidity
- C. Ataxia

III. Region Involved
- A. Quadriplegia
- B. Paraplegia
- C. Diplegia
- D. Hemiplegia
- E. Double Hemiplegia
- F. Triplegia
- G. Monoplegia

IV. Amount of Muscle Tone
- A. Hypertonic
- B. Isotonic
- C. Atonic

V. Degree of Involvement
- A. Mild
- B. Moderate
- C. Severe

The second category is the descriptive classification of the neuromotor disorder. Spastic cerebral palsy, which is the most prevalent type, constitutes 65 per cent of the cerebral palsy population. It is characterized by the stretch reflex. This easily excited reflex gives a secondary disorder of motion. The stretch reflex has three main characteristics: 1. It is more prominent in antigravity muscles such as the biceps and the quadriceps. 2. It is more easily elicited by rapid motion. 3. It interferes only with its antagonist.

THE DYSKINESIAS

The dyskinesias are characterized by a primary disorder of motion and varying or absent degrees of tone which modifies the motion. The choreas have involuntary, unpredictable, and excessive motion with little if any tone and are quite rare. The athetoids have more tone and their involuntary motions are slowed down to a worm-like pattern. These children constitute about 25 per cent of the C. P. population. The dystonias have marked tone and are commonly called tension athetoids and have less motion as a result of this increasing tone. The rigidities are now thought to be dyskinesias in which the tone is so great that the disorder of motion is completely blocked. Rigidity has four characteristics: 1. It is more easily brought out by slow motion that gives a lead pipe or cogwheel effect. 2. It will shake loose if the examiner is strong enough. 3. It is more prominent in antigravity muscles, the triceps, and hamstrings. 4. It is intermittent and varies from day to day. The rigidities and mixed type constitute about 6 per cent of the C. P. population.

THE ATAXIAS

The ataxias are the rarest form of cerebral palsy, get the best results, and constitute only 4 per cent of the population. These are characterized by a loss of balance and position sense.

The third category is the classification according to the areas involved. Quadriplegic children have involvement of all four extremities and may be of any type. It is sometimes quite helpful in diagnosis to know that spastics generally have much more involvement in the lower extremities than in the upper extremities, and in athetosis the involvement is generally more in the upper extremities. Paraplegic children have involvement only in the lower extremities and usually are spastics or rigidities. Diplegia is a term used to describe the quadriplegic child who has only very minimal involvement in the upper extremities. These children invariably are spastic. Hemiplegic children have involvement in the upper and lower extremity on only one side, are generally spastic, and invariably have much more involvement in the upper extremity than in the lower extremity. Double hemiplegia is a term used to describe the unusual spastic quadriplegic who has more involvement in the upper extremities than in the lower extremities. Triplegia and monoplegia are three-extremity and one-extremity involvement. They are usually spastic and are very rare.

The fourth category is the classification based on the amount of muscle tone present and is very helpful since the amount of muscle tone appears to increase somewhat with age. Hypertonic implies more than normal muscle tone, isotonic implies normal tone, and atonic implies decrease below the normal amount of tone and is best seen in the choreas or flailing athetoids.

The final category is a classification according to the degree of involvement with a mild case being ambulatory and self-helped. The moderately involved child has difficulty with speech, self-help, and ambulation and frequently needs considerable treatment. The severely involved child is bedridden and usually no treatment is helpful.

According to the above classifications, we could give a fairly accurate clinical picture of a child

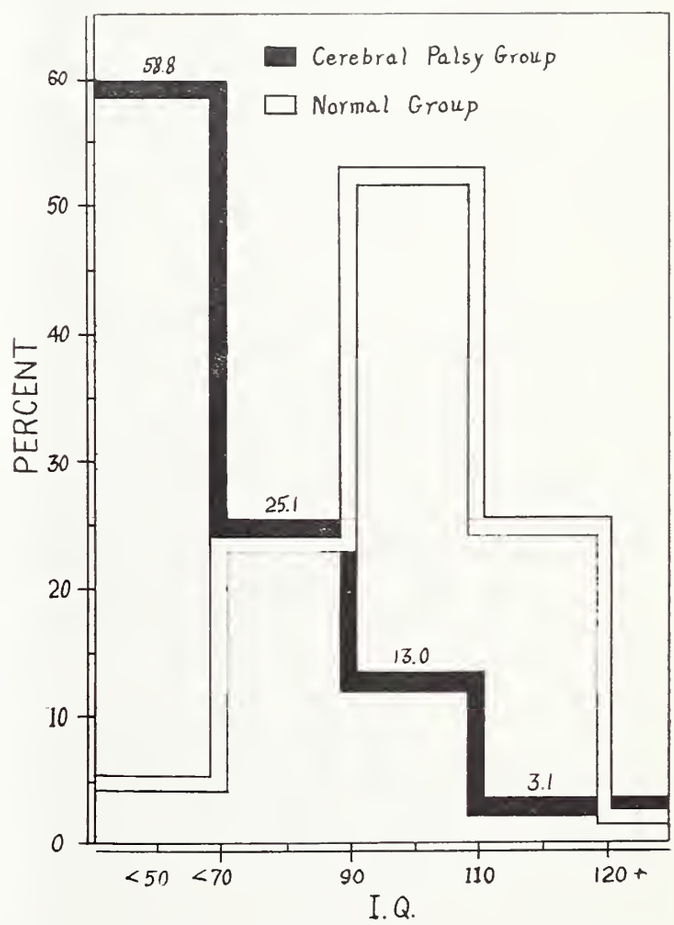

Figure 2. Distribution of IQ's in 1,003 cerebral palsy patients (North Carolina Cerebral Palsy Hospital).

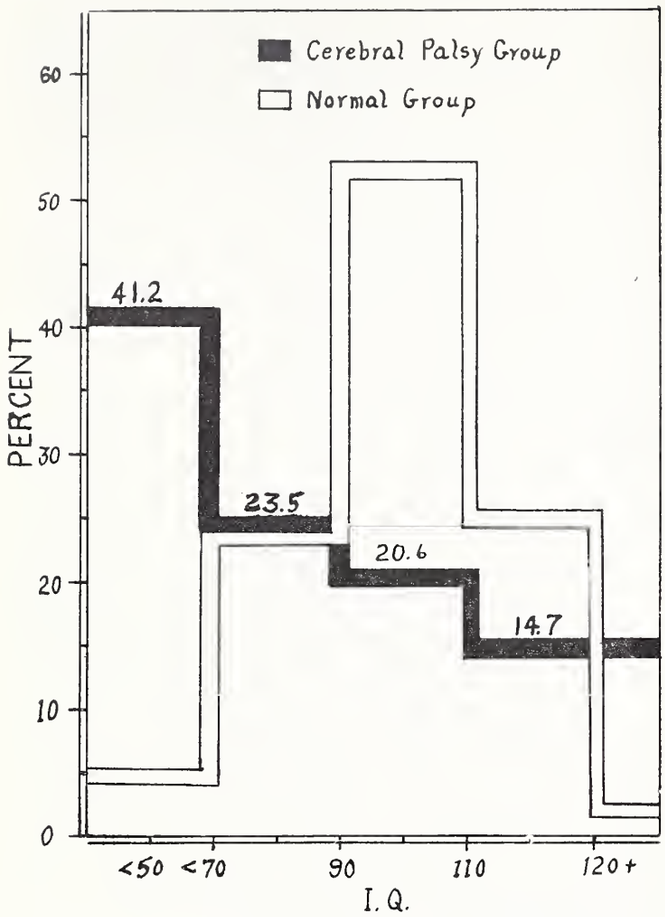

Figure 3. Distribution of IQ's in 70 cerebral palsy patients (Mississippi Hospital School for Cerebral Palsy).

such as an acquired hypertonic spastic quadriplegia, severe degree, following encephalitis.

SUMMARY

Cerebral palsy has its origin in defective global brain structures and multiple handicaps are the rule rather than the exception. Mental retardation is highly prevalent in the cerebral palsied population with 60 per cent of these children being significantly mentally retarded. This necessitates a realistic approach to any treatment program in order that realistic goals may be attained and later personality maladjustments be avoided. Motivation and intelligence do not necessarily correlate, and mentally retarded children frequently respond quite well to physical and surgical treatment. ★★★

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TEXAS MEDICINE

There's a successful ophthalmologist in Dallas who specializes in grinding Cadillac windshields to his patients' prescriptions *(W. E. Lotterhos, Jackson)*. . . . And then there was the stingy Texan who bought the pharmaceutical company so he could get his penicillin wholesale. . . . At the medical meeting, the Kentucky doctor grew weary of a Texas colleague's bragging. "Why," said the Kentuckian, "we have enough gold at Fort Knox to build a solid wall four feet high around Houston." The Texas physician never batted an eye: "O.K., go ahead and build it, and if it looks nice, we'll buy it."

Nerve Injuries of the Hand

J. T. DAVIS
Corinth, Mississippi

Major nerve injuries of the hand require careful evaluation and management decisions based upon many factors. The author discusses both compound and closed nerve injuries as well as primary and delayed repair. Diagnostic tests for extent and nature of trauma, surgical technic, and postoperative management are examined.

To deprive tissue of its nerve supply is to separate it from that spark of life so necessary for its growth, function, and vitality. This is particularly evident in nerve injuries of the hand. When major nerve injuries are neglected, the hand becomes withered and is coddled by the body in an attitude of protective custody. Characteristic deformities are atrophic paralytic musculature and thin, shiny, tight skin.

NERVE INJURY MANIFESTATIONS

Each nerve injury has a distinctive manifestation. Severance of the median nerve is characterized by the usual flexor claw deformity of the digits and atrophy of the thenar muscles. The flat hand is an indication of atrophic intrinsic muscles, and hyperextensive deformity of the metacarpal joints is typical of ulna nerve interruption. Motor paralysis of the extensors of the digits and wrist results in the well-known "wrist drop" in radial nerve palsy. All of these nerve injuries—either individually or in combination—render a serious and severe disability to the patient.

Optimum rehabilitation at the earliest possible time is the prime objective of the attending surgeon, but this goal is frequently difficult to attain even under ideal circumstances. Traumatic wounds of the hand presenting nerve injuries often involve many other structures among which are bones, joints, tendons, and soft tissues. Thus the injury may exhibit a composite problem, requiring correlation of plastic, orthopedic, and neurosurgery. Those undertaking the care of such wounds should equip themselves with a thorough knowledge of the intricate anatomy, special technic, and skill necessary to achieve successful functional restoration.

Most general surgeons have been confronted with these problem cases, and while they may not expect to undertake definitive surgical care, they should be familiar with the essential fundamentals of early care. It is just as important to know "what not to do and why" as to know "what to do and when." When doubt exists, immediate consultation should be sought, because skill and judgment exercised in the early hours following the accident are reflected in the degree of successful functional restoration.

Accurate and thorough appraisal of the injury is the first step in successful management. For the most part, errors in examinations result from failure to test for nerve injuries rather than lack of knowledge of the three major nerve distributions.

Alteration of sensory and motor function in the distinct areas innervated by the radial, median, and ulna nerves are diagnostic signs of nerve injury. While the overlapping effect of the sensory fibers in these three different fields may be confusing, simple diagnostic tests have proven to be quite accurate. They require only a sharp pointed pin and a flat surface, such as a table top. The hand should be placed on the flat surface in the position of complete extension.

TEST AREAS

The areas to be tested for sensation are those least likely to be reached by the overlapping fibers of the adjacent nerves. For the ulna nerve, the testing area is the palmar surface of the tip of the fifth finger. To test for the median nerve, the palmar surface of the tip of the index finger should be used. The dorsal aspect of the web between the thumb and index finger is the test area for the radial nerve. By pricking these areas to the

point of pain in comparison with the same area on the uninjured hand, it can be determined if there is a nerve lesion of surgical significance.

The usual motor tests are carried out with the hand extended flat on the top of a table. If

Figure 1. Graphic illustration of simple motor and sensory tests for radial, median, and ulna nerves of hand.

the two ulnar fingers (fourth and fifth) can be readily separated and moved from side to side, demonstrating the action of the lumbricales muscles, the motor fibers of the ulna nerve are intact. If the index finger can vigorously scratch the top of the table with the finger nail, the median nerve is intact because it is the entire innervation of the flexor indices propius. If strong extension of the distal phalanx of the thumb and vigorous abduction against resistance can be demonstrated, the radial nerve is in continuity. These tests can be performed easily and rapidly. If they are positive, further and more elaborate tests are indicated to determine the extent of the injury.

As a practical working classification, nerve injuries may be divided into compound and closed injuries.

COMPOUND NERVE INJURIES

Compound wounds of the hand presenting nerve injuries require the same meticulous care in cleansing and debriding as any severe hand injury. These details are described in many excellent essays on hand injuries. The bloodless field afforded by the use of a pneumatic tourniquet is almost imperative. The anesthetic of choice is usually dictated by the type of injury to other tissues, age and cooperation of the patient, and extent of surgery anticipated, rather than by nerve injury.

Once the wound is prepared for surgery, the question arises as to whether the injured nerve should be immediately repaired or the wound cleaned, debrided, and closed in anticipation of definitive surgery at a later date.

Primary Repair Many surgeons experienced in this special field have produced well-documented evidence showing that immediate suturing of the severed nerve gives superior results. This is particularly true in sharply incised wounds with a minimum of trauma and contamination. Nerve tissue withstands infection extremely well, even in the presence of gross contamination. Primary repair is preferable when a wound is amenable to cleansing and debridement. Since spreading infection tends to compromise surgical results, extreme caution should be exercised in dissecting beyond the contaminated wound in attempting to free and elongate the nerve.

As regards technic, immediate or primary suturing is accomplished largely in the same manner as delayed suturing.

Delayed Repair Following an extensive wartime experience, Spurling, Seddon, and other collaborators stated in general terms that results obtained from delayed or secondary nerve suture are superior to results of immediate suture. Two

Figure 2. Gunshot wound, through and through, from base of hand—initially reconstructed with K-wires and pedicle flap followed by iliac block bone graft to support remaining distal one-half of third and fourth metacarpal. Bridging of one and one-fourth inch gap in median nerve distal to transverse carpal ligament by flexing wrist and elbow and free dissection of nerve distal one-third of forearm.

important factors led to this opinion. Because war wounds are usually multiple and extensive, accurate appraisal of the amount and level of nerve injury was difficult to make. When immediate suture was practiced, all the damaged nerve fibers were frequently not excised. This allowed neuromas to form at the site of the unexcised, damaged nerve fibers necessitating reoperation at a later date when signs of regeneration were not evident.

Since sufficient time for nerve regeneration following primary repair should be allowed, these collaborators contend that lapse of more than three months before undertaking further resuturing diminishes the opportunity for optimum results. This is the second factor.

Today, a private practitioner, confronted with a nerve injury together with multiple contaminated wounds, may elect to clear the wound, tag the nerve segments together with two sutures of No. 6-0 black silk, and close the wound anticipating later repair—especially if it's the middle of the night and the patient is uncooperative and ill-prepared.

Figure 3. Primary repair of cleanly incised wound proximal to "no man's land," both sublimus and profundus tendons, and digital nerves of index finger. Good functional results in full flexion and return of sensation to distal phalanx of index finger in three months.

Advantages of delayed repair are:

1. The injury can be studied and appraised more accurately, permitting proper planning for surgical repair.
2. Optimum preparation of the patient, the surgical team, and operating theater can be achieved in anticipation of extensive and sometimes prolonged surgery.
3. The wound and surrounding tissue present a clean operative field for whatever extensive dissection is necessary for freeing of the nerve, allowing accurate coaptation of healthy segments without tension.
4. Damaged nerve tissue is more discernible after a few weeks of healing, allowing accurate appraisal of the injury and complete excision of the intervening neuroma.

Figure 4. Incomplete interruption of median nerve just proximal to transcarpal ligament with upholstering knife. Sketch indicates overlapping effect of adjoining nerve fibers. Repair with fair results.

5. The epineurium near the point of injury is thicker and will hold sutures without tearing out.
6. Transplantation of a resutured nerve from an avascular scarred bed to one with a healthy environment conducive to healing can be accomplished.

SURGICAL REPAIR

Skin incisions are planned to encompass the scarred and injured tissue and to allow for necessary extension in freeing up the nerve for coaptation without tension or transplantation of the sutured segments. Dissection should begin over the proximal and distal segment and approach the scarred area between. Infiltration of the tissues about the operative site with one-half per cent novacain aids in dissection. The scar or neuroma holding the nerve segments intact should not be excised at this time but used as a handle in mobilizing the normal nerve. Scarred ends should overlap so as to approximate normal nerve tissue without tension.

The neuroma on the proximal segment is transected at right angles near its base with a sharp razor blade. The division along the distal segment is more generous so as to go well beyond the injured and scarred fibers. Usually, free bleeding is encountered when normal nerve tissue is reached. The blood vessels coursing longitudinally along the nerve often serve as landmarks to prevent rotation at the time of suturing.

When dissection has progressed to the point that normal nerve segments may be approximated without tension, coaptation may be accomplished

with fine arterial No. 6-0 black silk suture swagged on an atraumatic needle. Care should be exercised to include only the epineurium in procuring a smooth union by interrupted stitches. It is good practice to place two fine metallic sutures on either side of the anastamosis when repairing the larger nerve trunks to facilitate observation of post-

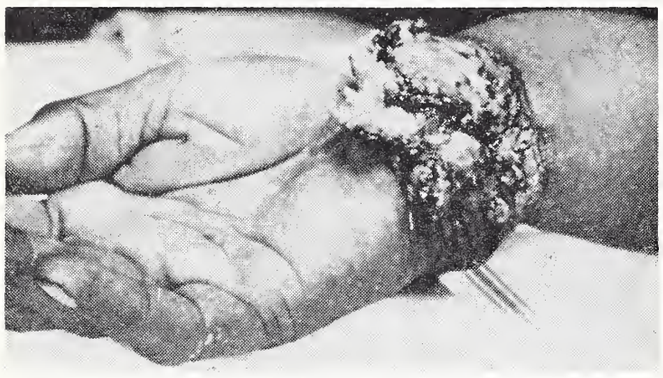

Figure 5. Compound dislocation of wrist, showing distal radius, ulna, and semi-ulnar bone with displacement of tendons and nerves to ulna side, without interruption. Reduced without further necessary surgery to tendons or nerves, resulting in partial ankylosis of wrist but return of function in median and ulnar nerve distribution.

operative continuity by x-ray. The use of a loupe in suturing the smaller digital nerves assists in attaining accurate approximation.

When closing the operative wound, great care should be exercised to prevent tension on the anastamosis. The joints proximal and distal to the wound should be flexed when necessary, and the tissue about the suture line closed last so as to visualize the line just before closing the skin and applying the plaster cast for immobilization. Immobilization should be as nearly as possible in the position of function. Only those parts necessary for relaxation of tension should be incorporated into the cast, allowing unrestricted movements of all joints beyond. At the end of three weeks x-rays should be procured to check the position of the metallic sutures and the continuity of the suture line. Motion is begun at the end of three weeks, since the healing period for nerves coincides with that of tendons, when both are repaired at the same time.

POSTOPERATIVE CARE

During the postoperative period of mobilization before regeneration of the nerve, anesthetic areas must be protected. Adults must be warned against accidental burns and trauma to the hand. Gloves for young children often serve as protection against burns as well as biting the tips of the fingers.

Early mobilization of all joints is encouraged on a graduated scale avoiding overextension to the point of stretching the suture line of the nerve and tendon. Adequate physiotherapy with active motion will in most instances prevent contractures and stiffness of the joints and restore the part to full mobility pending successful nerve regeneration.

Many factors govern the rate of growth of the nerve fibers down the distal segment to their respective areas of innervation. The most important are adequate suturing without tension and adequate blood supply to the part. The average rate of growth has been estimated at about one inch per month. The first signs of regeneration are usually appreciation to deep pressure soon followed by an ill-defined sensation to pin prick, sweating of the part, and last, light touch. It is unlikely that normal sensation and point discrimination will ever return.

CLOSED NERVE INJURIES

Typical of the closed type of nerve injury are those due to compression and contusions producing scarring and neuromas along the course of

Figure 6. Thenar atrophy due to injury of motor branch of median nerve due to colles fracture. No repair advised.

the nerve. For example, wood workers who continuously use the base of the hand as a driving force often injure the median nerve within the transverse carpal ligament. Compression of the nerve due to deforming fractures of the distal radius or carpal bones, osteoarthritis, and tenosynovitis may produce symptoms of pain, tingling and numbness in an intermittent or delayed fashion, which are most often noted at night and confined to the median nerve distribution. This syndrome, commonly known as "Tardy Median Palsy" was described by Cannon and Love in

1946. Frequently, the same train of symptoms may be seen temporarily in the unaccustomed manual worker. In this case it is thought compression of the median nerve is due to increased pressure within the carpal ligament occasioned by hyper-extension of the wrist in heavy manual labor. Mild to severe muscular atrophy may be seen in a significant number of these cases due to interruption of the motor branch of the median nerve innervating the thenar muscles.

SURGICAL DECOMPRESSION

Surgical decompression is the treatment of choice by most surgeons. This is accomplished by exposing the transverse carpal ligament through a transverse skin incision at the crease of the wrist and dividing the ligament longitudinally. The division should be extended well into the palm to assure complete unroofing of the compressed nerve after positive identification. Fortunately, relief is usually prompt and good results achieved without further surgery.

Other types of closed nerve injuries are those due to tearing and stretching of the nerves, commonly seen in injuries of the deep tissues. This may occur when the hand and arm are caught between two rollers in a machine. The nerve fibers are ruptured and torn, sometimes distant from the point of injury. This presents a problem difficult to evaluate and necessitates observation and study over a period of two to four months or longer. Often in this type of injury, the nerve may be damaged at many different levels but still remain in continuity. Healing is by scar tissue or by the formation of masses of tangled regenerating axons. In this case, a few fibers may have found their way through to the distal segment and present varied and atypical localizing signs which are confusing. Surgical intervention should be withheld until sufficient time is allowed for nerve regeneration and clarification of the clinical picture, keeping in mind the level and type of nerve injury, as well as the vascular supply to the part which may alter the progress of nerve regeneration.

Two important factors in the surgical management of closed nerve injuries or neuromas in continuity should be carefully weighed before resection is deemed advisable.

1. Has sufficient time elapsed for maximum nerve regeneration?
2. Can the clinical condition of the patient be improved enough to warrant the risk of success accompanying resection?

It is the opinion of the author that incomplete nerve injuries and neuromas in continuity present difficult and formidable problems. Successful management is achieved only after careful study and extensive clinical experience. ★★★

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NUMBER PLEASE

When you talk with someone on the telephone, do you always talk as though that person were seated with you in the room in which you are talking? If your answer to this question is "yes," you are using the telephone to improve your public relations. If your answer is a qualified or an honest "no," use of the telephone is bad for your public relations. But don't blame Alexander Graham Bell or the telephone; blame yourself. You don't have good telephone manners.

—Hugh H. Hussey, M.D.
Member, AMA Board of Trustees
Washington, D. C.

Mathematics, Computers, And Your Health

GEORGE R. PRICE

In the past computers have proven to be invaluable business aids as well as good chess players. Now they are being programmed to help the doctor and may soon be used to explore the diagnosis and treatment of such diseases as cancer. The possibilities of the computer as the physician's helper are discussed in this article reprinted from Think magazine.

LAST FALL, IN THE FIRST STAGE of what is probably the most important medical survey ever made, 70,000 volunteer workers of the American Cancer Society collected elaborate questionnaires from a half million families in 20 states. As the answers are processed during the next few years, we can hope for findings that will be of vital interest to every person in the country. In addition to telling us what to do to cut down our chances of getting cancer, the survey should also give us important new information about the causes of many other diseases, such as cerebral hemorrhage, diabetes and heart disease. Among the puzzles that should be enormously clarified is the relation of diet and exercise (or rather, lack of exercise) to heart disease.

The questionnaires cover a multitude of matters, from the medical history of parents and grandparents, through childhood diseases, occupations, amounts of sleep and exercise, eating, drinking and smoking habits. This information will a few months from now be transferred to punched cards. Then, during the years to come, whenever an individual in the survey dies, his state health department will send a copy of the death certificate to American Cancer Society headquarters; there, data will be mathematically analyzed.

Researchers will then study the data and ask such questions as:

"Was there something distinctive in the living habits or the heredity of the people who got stomach cancer?"

"Are people who eat an unusual amount of meat fat and hardened vegetable fat more likely to suffer heart attacks?"

"These people developed cancers that were first noticed during 1961; was there any indication back in 1959 from which one might have predicted that they were likely to develop cancer?"

Never before in medicine has there been a survey approaching this in magnitude; and the findings should be of the very greatest value. But let us for a moment take a look further ahead and see how such studies may someday be made if the dream of Dr. V. K. Zworykin, renowned television inventor, comes true.

Dr. Zworykin has devoted most of his time during recent years to work at the Rockefeller Institute for Medical Research on the application of electronics to medicine. He foresees a gigantic digital computer system centrally located in the United States to process medical information for the entire nation. Individual physicians use the system by means of small control boxes on their desks, linked by telephone line to the central installation. When a new patient calls, the doctor gives the patient's name and address, or possibly a medical identification number to the computer system. In a few minutes, the patient's complete medical history, from the causes of his grandparents' deaths up to the results of his latest examination, comes from the control box, perhaps in the form of a facsimile print.

Next, the doctor examines the patient. If the diagnosis is not immediately obvious, he can report his findings to the central computer, using it

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CLASS 6   DISEASE 1013 CHRONIC LEUKEMIA                    HAS  4 CRITICAL SYMPTOMS WITH SYMPTOMS
00 TESTED AND PRESENT,
33, 46, TESTED AND ABSENT, .AND
81, 86, NOT TESTED

          DISCARDED FOR SYMPTOMS  33, 46,
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Computer print-out shows how leukemia symptoms can be classified for quicker identification of the disease.

as a sort of giant reference book to help him. Within seconds or minutes—depending on how many other physicians are simultaneously calling upon the computer—there comes back a list of possible diagnoses plus suggestions of additional tests to make.

DOCTOR TO COMPUTER INFORMATION

Even more important than this computer-to-doctor service, however, is the doctor-to-computer information. If doctors include in their examinations questions about living habits, then information needed to help elucidate causes of diseases will be constantly available for quick processing by the central computer. Then, if a researcher develops some hypothesis, he can test it in a few days or even hours. And the computer itself could systematically invent hypotheses and spend nights and weekends (when the work load from physicians seeking information might be low) searching automatically for correlations in respect to all diseases whose causes were still unknown or uncertain.

Such a system, of course, is not something we are likely to see during the next few years. And yet, its feasibility is "unquestioned," according to Dr. Robert S. Ledley of the George Washington University electrical engineering department, who has been engaged by the National Academy of Sciences-National Research Council to survey the application of electronic computers to biology and medicine. As Dr. Ledley points out, closely related technical problems have been met and solved in the computer systems that make nationwide airline and hotel reservations, handle elaborate financial records, and control vast air-defense networks.

In any event, even if this ideal system never does come into being, it seems certain that modern computer techniques are going to play an important role in medical research and practice. Right now, the *Current List of Medical Literature,* published by the National Library of Medicine, lists more than 100,000 articles a year; probably few physicians can find time to read even 1 per cent of these. The book, *Standard Nomenclature of Diseases and Operations,* devotes some 400 pages just to listing in fine print the names of diseases, and theoretically the patient who walks into a doctor's office might have any one of these. Thus, it is not surprising that in dozens of institutions around the country teams of researchers are trying to find ways to put computers to work to help on medical problems.

One current application of computers is to analyze electrical signals from the heart and the brain. Professor R. G. Bickford of the Mayo Clinic, for example, is developing ways to use computers to study brain waves, Several years ago, he designed an automatic brain wave monitoring system to regulate anesthesia in surgical operations, since the brain wave intensity changes with the depth of anesthesia. Currently, he is using an electronic digital computer to analyze brain wave patterns in order to develop better ways to diagnose epilepsy. His hope is that the computer will detect abnormalities too subtle to be noticed by a physician studying brain wave recordings by eye in the usual way.

Similarly, a research group at the National Bureau of Standards takes electrocardiogram signals recorded on magnetic tape, converts them to a numerical form that can be "understood" by a digital computer, and uses the computer to analyze them in the hope of developing better ways to diagnose heart disease.

What, briefly, does a computer do? Essentially, all it does is move about small items of information and combine them in simple ways according to a list of instructions called a *program,* composed by expert mathematicians called *programmers.* It is the programmers, not the computer, who do the real thinking.

KINDERGARTENS AND COMPUTERS

In fact, it would be possible to take a kindergarten class and train each child to carry out one simple task, and in this way duplicate exactly the operation of a giant digital computer. One child, for example, would look at a particular area on each sheet of paper handed to him. If he saw a mark written in that area (say, the center of the top line) he would put the paper in a pile on his right; if the area was blank, he would put the

paper in a pile at his left. A mark at a particular location might mean anything—the digit 8, for example, or the fact that John Smith had frequent headaches—but none of the children would know this. They would simply be following instructions; yet they might solve problems in quantum mechanics or diagnose diseases.

An electronic digital computer operates in the same way, except that it is hundreds of thousands of times faster, and far more reliable. If the electrical signals represent numbers, the computer performs numerical calculations. If they represent medical facts, then the computer may suggest a diagnosis or propose a new theory of schizophrenia—if the programmers are intelligent enough.

DIAGNOSIS AT A GLANCE

In the examples mentioned where computers help in diagnosis by analyzing brain waves and electrocardiogram patterns they do this largely by performing numerical calculations. What about using computers to recognize patterns among different types of symptoms as an aid to diagnosis in general? How much help can they give physicians here?

Many physicians learn to diagnose a number of ailments by a mere glance at a patient. Thus, Dr. Victor Heiser, in the 1936 bestseller, *An American Doctor's Odyssey,* tells of examining immigrants at a rate of a few seconds each by carefully observing them as they walked down a narrow path and made a right-angle turn: a characteristic gait suggested hernia; the head slightly tilted to one side indicated deafness; ridged nails and a peculiar facial pallor suggested heart disease.

It is obvious that computers offer little promise of duplicating this sort of wizardry. But there is a small fraction of patients who present extremely difficult problems so that days of elaborate testing and consultations are required for diagnosis; it is possible that computer systems can be of great value here.

PIONEER INVESTIGATION

A pioneer investigation in this field was made in 1952 by Drs. Martin Lipkin and James Hardy at the University of Pennsylvania, using hand-sorted punched cards. Today, Dr. Lipkin (now at the New York Hospital-Cornell Medical Center), Dr. Zworykin and five associates are studying application of electronic digital computers to the problem. They began by analyzing the way a physician performs diagnosis, and then they programmed a computer to go through a similar process.

TWENTY QUESTIONS

In this instance, the computer resembles what we do when playing the game of Twenty Questions. Thus we ask: "Is the person a man? Is he living?" And finally we suggest: "It's Winston Churchill." In a similar way the computer asks itself: "Is the patient's liver enlarged? Is his hemoglobin elevated?" and so on. Finally, it suggests: "The patient may have polycythemia vera." Thus far the the investigation has been limited to diagnosis of blood diseases, but other disease categories will be added later.

One of the men associated in this work, Dr. B. J. Davis of Mount Sinai Hospital in New York, is also working with a different group of researchers in a fundamental study of symptom patterns in diseases, using an ingenious digital computer technique developed by Dr. T. T. Tanimoto of IBM. To get a rough idea of the mathematical analysis carried out by the computer, we can visualize things in the following way: Imagine that we have data on 100 patients all with the same disease; for example, leukemia. We take a large sheet of tabular paper, and in the first column we write the names of the patients, one below the other. In the second column we place a plus sign if the patient has an enlarged liver, a zero if his liver is of normal size. In the third column we place a plus sign if his white blood cell count is above 20,000 per cubic millimeter, a zero if below 20,000. We continue in this way until for each patient we have a *symptom pattern* in +'s and 0's something like this:

John Smith + 0 0 + + 0 + + + 0 0 + + + + 0 +

SYMPTOM PATTERNS

Now if we glance over the sheet we may notice that John Smith's symptom pattern is very similar to Jack Doe's but different from Mary Jones's. What the computer does—within roughly 90 seconds—is to derive a sort of average symptom pattern for the 100 cases, and measure how similar each patient's symptoms are to this average pattern. Next, Dr. Davis or one of his associates will look over the results, and perhaps decide to concentrate on the 60 patients whose symptom patterns are most typical. Then the computer, following a different program, examines the 50 or more different symptoms and notes which of them occur most consistently in these typical patients. And so the analysis proceeds, with rapid, highly flexible communication back and forth between the physician and the machine.

This work is still at a quite early stage. Eventually it should tie in with the Lipkin-Zworykin program by indicating which symptoms are most useful in diagnosis. However, its potentials are broader than diagnosis. Because of the flexible communication between the computer and the researcher—which is its most significant feature—it promises to develop into a research tool of great power that can be applied to many different medical problems.

While both the programs just described are a number of years away from practical application to preventing and curing disease, one place where digital computers are playing an important role right now is in the search for anti-cancer chemicals. The Cancer Chemotherapy National Service Center at Silver Spring, Maryland, coordinates a nationwide program in which reports on screening tests are sent out from testing laboratories at a substantial rate of 1,000 or more a day.

MAMMOTH MEMORY

In the data processing system designed by Documentation, Inc., of Washington, D. C., the first step is to enter the test data on punched cards for reading into a digital computer with very high capacity, magnetic-disc memory. For each compound tested, the computer checks its memory for any previous reports on the same compound, and then calculates the statistical significance of the test results. At any time an operator can make the computer print out all the information it has received on a given compound. Or he can even direct it to search through its memory for any other compounds with similar chemical structure or properties. Thus, the system serves as a combined statistical calculator, record file and library search machine. At present it is used only for chemical screening tests against animal tumors and tumor cells in tissue culture, but extension to cover chemical experiments on human tumors is possible.

Still another type of application is the use of computers to make models of body systems and disease processes. This is illustrated by the work on arterial disease conducted by Dr. Ralph W. Stacy of Ohio University. The pulse pressure wave in an artery changes its wave shape as it moves away from the heart, and this change depends on the mechanical properties of the artery. Is it elastic or brittle? Has its inside diameter been decreased by arteriosclerotic deposits on the wall? Dr. Stacy uses an analog computer to simulate electrically these mechanical properties. Into the computer goes an electrical signal representing the arterial pulse as it is detected near the heart. Then the controls are manipulated, changing the electrical system inside the computer, until the signal that comes out is similar to the pulse as detected at the wrist. This means that the computer has been adjusted to match the patient's artery. Hence, from the setting of the controls, Dr. Stacy can read off information about the actual condition of the artery.

MEDICAL ROULETTE

Another type of model is a *probability model* involving the so-called "Monte Carlo method," which was first developed at Los Alamos for calculating the behavior of neutrons in nuclear piles and atomic weapons. Dr. Donald D. Wall, a White Plains, New York, mathematician has applied Monte Carlo techniques to studying the spread of a disease epidemic.

The difficulty in both the neutron problem and the epidemic problem is that what happens depends on a great many chance occurrences. One way to handle these matters of probability or luck would be to spin a roulette wheel to decide whether a person is exposed to the disease, whether he visits a doctor before he exposes anyone else, an so on. For example, we imagine some typical person in a community where the disease is present, and we say that if the ball comes to rest at a number greater than 20, he is exposed to the disease. If the roulette wheel tells us that he is exposed, we spin it again and say that if it stops at a number greater than 12, he is susceptible and catches the disease. By continuing in this way, we determine what happens to one person, and by repeating the process for a few hundred different people we can eventually get an over-all picture of how the epidemic spreads.

COMPUTERS FOR TRAINING

What Dr. Wall did was to program a computer to do something similar to this, having it make repeated random choices as though it had spun a roulette wheel. For this purpose he invented an imaginary, highly simple disease, because the factors involved in the spreading of actual diseases are extremely complex. But extension to actual diseases is possible, to yield models with which public health officials can experiment to predict the effects of such measures as vaccination or stricter quarantine.

A novel use of computers in model-making has been suggested by Instrument Systems Corporation of College Point, New York. They propose constructing from analog computer elements a

simulator to train medical students in administering anesthesia, just as flight trainers simulate an airplane for student pilots. The anesthetist training device would include a sort of dummy human being with imitation heartbeat, respiration and other physiological signs, all under computer control.

HEART ATTACK FORMULA

The student could operate the controls to simulate the effect of supplying oxygen, ether, a spinal anesthetic, and so forth. And the instructor could adjust the computer to simulate an emergency—the patient going into shock, for example—just as an emergency can be simulated in a flight trainer and the student pilot taught how to get out of a tailspin or make a crash landing in a fog.

Still another line of research is illustrated by the work of New York heart specialist Dr. Menard Gertler and New York University mathematician Dr. Max A. Woodbury. They have used a digital computer to develop the following formula to predict the probability that a healthy young man will have a heart attack by his early 50's:

$$Y = 898.28 - 546.15X_1 + 218.29X_2 - 94.75X_3 + 63.19X_4 + 6.35X_5 + 38.86X_6 + 57.23X_7 + 48.41X_8$$

The higher Y is, the greater the chance of a heart attack. X_1 is a measure of height, and the minus sign shows that the taller a man is, the less his chance of heart disease. X_2 measures cholesterol in the blood; the plus sign shows that, other things being equal, the more cholesterol, the more chance of heart disease. The remaining variables measure other chemical substances in the blood and take account of heredity and body build.

One particularly interesting thing about a prediction formula is that it may do more than predict. If it tells us that a high concentration of a certain compound in the blood is related to a future heart attack, this suggests that perhaps that substance is a clue to the cause of the future disease. And since the prediction formula measures the relative importance of diffierent indications of future diseases, it suggests the relative importance of different factors as possible causes.

Thus computers may help in the *understanding* of disease processes. For example, when the Gertler-Woodbury prediction formula tells us that cholesterol and other substances are in some way related to the development of coronary trouble, our doctors have a better understanding of arteriosclerosis.

To be sure, the present formula is a very crude model that fails to tell *how* these substances are related. But as further information is assembled and new hypotheses are developed and tested, more and more detailed models can be constructed, until at last we have a full picture of the whole process.

SUMMARY

Mathematics is only now beginning to enter substantially into medicine because the mechanisms of disease processes are so incredibly complex and the amount of data that must be gathered and dealt with so enormous. But now, with the advent of the computer, the situation has changed. It is precisely such extremely complex problems involving vast masses of data for which computers are primarily suited. ★★★

(The author is indebted to medical electronics specialist Carl Berkley of the Rockefeller Institute for Medical Research for furnishing much helpful information used in this article.)

MEET MAYO

A newly arrived patient at the Mayo Clinic, obviously affluent and equally obnoxious, beckoned a kindly looking, white haired doctor to his chair in the reception lobby.

"Tell me, my good man," said the patient officiously, "are you the head doctor around here?"

Dr. Will, senior of the well-known brothers, bowed courteously and replied, "No, sir, it must be my brother you are seeking. I am merely the belly doctor."

A Double-Blind Study of Essential Hypertension

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In a controlled, double-blind hypertension study, sixty-six patients received placebo and ergotoxine alkaloids parenterally. Thirty received placebo, ergotoxine alkaloids, and dihydroergocornine orally. For 59 weeks, parenteral placebo and ergotoxine alkaloids administration caused significant decrease in systolic pressure. Parenteral drug and placebo administration was followed by a significant decrease in diastolic pressure through the 135th week. Patients receiving oral placebo experienced no significant change in pressure; a decrease in systolic and diastolic pressure followed oral administration of ergotoxine alkaloids. Dihydroergocornine orally did not decrease the blood pressure. A statistical base line for evaluating antihypertensives is established.

THIS PAPER IS A REPORT of a study that was begun at the University of Mississippi School of Medicine in January 1956, and is still being conducted. All the statistical analysis has been done by Dr. James G. Hilton, and he has helped prepare the various protocols. Dr. Hilton, using the "t" test, has established a p value of .05. Dr. Herbert G. Langford, associate professor of medicine, University of Mississippi School of Medicine, has assisted greatly in the organization and planning of this study.

In view of the varying reports in the literature regarding the hypotensive effect of antihypertensive agents, it was felt that a real need existed for a controlled double-blind study. When this study was begun, we were able to find no reports of a double-blind study. In fact, some investigators stated that such a study was impossible to conduct in the area of hypertension. Even now only a few such studies have been made. It was also felt that previous results obtained in private patients using the hydrogenated alkaloids of ergot (Hydergine) needed to be confirmed or rejected.[1, 2] This was important since no controls were used in the private patient group.

The basic aims of this study have been twofold. First, to create a base line under controlled conditions with oral and parenteral placebo. These would serve as standards for the evaluation of various antihypertensive agents. Second, as a long range study this would give some indication of the usefulness of lowering blood pressure for a prolonged period of time in protecting and producing survival in hypertensive patients.

All patients used in this study were patients from the outpatient clinic of the University of Mississippi Medical Center. These patients were treated on an ambulatory basis and received no medication other than that described in this paper. The patients were selected when their blood pressure was greater than 150/100 and graded according to the Schroeder classification.[3] Only stages I, II, or III have been included in this study. All patients with either malignant hypertension or stage IV hypertension were treated by other routines of therapy.

Each patient received a thorough physical examination including a complete blood count, serology, urinalysis, blood glucose, creatinine and NPN, chest x-ray, electrocardiogram, and PSP excretion test. Pheochromocytoma was screened for by the intravenous administration of phentolamine methanesulfonate. Upon completion of these procedures, the patients were grouped according to sex, race, stage of hypertension, and age within ten years. Wherever possible, paired patients were selected, and one patient received placebo while the other received drug.

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Read before the meeting of the Central Medical Society, Jackson, February 2, 1960.

The placebos and drugs used in this study have been administered in the following manner: (1) Parenteral agents were administered according to the dosage schedule set forth in earlier publications and used in private practice.[4, 5] (2) Oral agents were administered three times a day for twelve weeks.

The parenteral placebo used was normal saline. The parenteral drug used consisted of 0.1 mg. dihydroergocornine, 0.1 mg. dihydroergokryptine and 0.1 mg. dihydroergocristine per cc. (Hydergine).[6]

DRUG DOSAGES

To date the hypotensive effect of four oral substances given for 12 weeks is available while six additional substances are being studied. The oral placebo used was an inert nonflavored tablet. One oral investigative drug contained 5.0 mg. dihydroergocornine. Another tablet, available only for investigational use, contained 1.66 mg. dihydroergocornine, 1.66 mg. dihydroergokryptine and 1.66 mg. dihydroergocristine. The capsule contained 12.5 mg. rauwolfia (whole root), 0.1 mg. protoveratrine, and 2.5 mg. phenoxybenzamine hydrochloride (Dibenzyline) in strength one and double these amounts in strength two. The dosages employed for the reported drugs are:

(1) Placebo—one tablet three times a day
(2) Dihydroergocornine—one tablet three times a day
(3) Hydrogenated alkaloids of ergot—one tablet three times a day
(4) Mio-Pressin—
  a. No. 1—one capsule three times a day increased to 5 daily.
  b. No. 2—one capsule three times a day increased to 12 daily.

The usual routine followed was: The patient was screened, paired, and assigned to a drug or placebo group. The patients in those groups receiving parenteral agents reported to the outpatient clinic each time an injection was due. The patients in those groups receiving oral agents reported at weekly intervals. At each visit to the clinic the patient's blood pressure was taken three consecutive times at 10 minute intervals. Each pressure was recorded, but only the lowest diastolic pressure was used in the analysis of this study. All pressure readings were made by the registered nurse on duty in the outpatient clinic and with the patient in a seated position.

To limit the amount of variation in technique of taking blood pressure, one nurse made all blood pressure determinations from January 1956, to January 1957, another from January 1957, to May 1958, and a third from May 1958, to date. At no time have the nurses been informed of the identity of any oral or parenteral agent involved. During the period when the nurse was recording the blood pressure, the patients were questioned concerning their general well-being and the presence or absence of side effects.

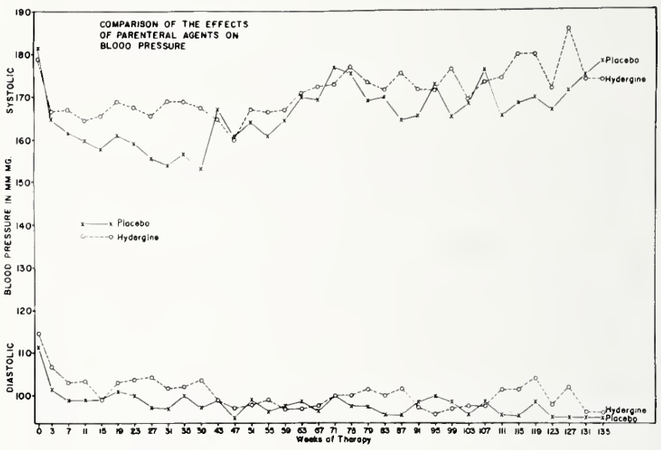

Figure 1. The effects of parenteral agents on blood pressure.

In Figure 1, of the 66 patients in the parenteral group of the study, 36 received saline and 30 received the hydrogenated alkaloids of ergot.

When a comparison is made of the results on systolic and diastolic blood pressure, there is no significant difference between the effects seen as the result of the administration of saline and the results seen from the administration of the drug. When the systolic blood pressures are analyzed, there is a significant decrease in the placebo treated group and the drug treated group for 59 weeks when compared with the initial control (i.e. week 0 of treatment). In contrast, there is a significant decrease in the diastolic pressure of both the drug and the placebo treated group for 135 weeks.

PLACEBO EFFECT

This study permits an unbiased objective measurement of the effect of various agents not possible in many other areas of clinical research. It is also noteworthy that this study bears out the results obtained in private patient series with Hydergine. However, the unanswerable question at this stage is whether or not the decrease obtained by the administration of the drug is placebo effect. At some future date, I anticipate the placebo effect to end. If those patients receiving the drug experience a continued decrease in blood pressure, we will then know it is drug effect. If

not, the decrease has been because of placebo effect.

It should be borne in mind that it is generally accepted that hypertension is a symptom of a progressive condition. If this is true, then placebo has not only decreased the blood pressure, but has also prevented an increase.

ORAL TREATED GROUP

In the oral treated group shown in Figure 2, the administration of a placebo was followed by no significant decrease in systolic or diastolic pressure. This was also true of the investigational drug, dihydroergocornine. However, the hydrogenated alkaloids of ergot caused a significant decrease in the systolic and diastolic pressure. There is a decrease in the mean blood pressure (diastolic plus 1/3 pulse pressure) of 18.9 mm. Hg. This compares quite favorably with the reports in the literature of reserpine. These vary from 0 to 22 mm. Hg. depending upon who has published the report. Mio-Pressin caused a significant decrease in diastolic and systolic blood pressure with a decrease in the mean blood pressure of 21.2 mm. Hg. when the maximum dose of 12 capsules No. 2 was given.

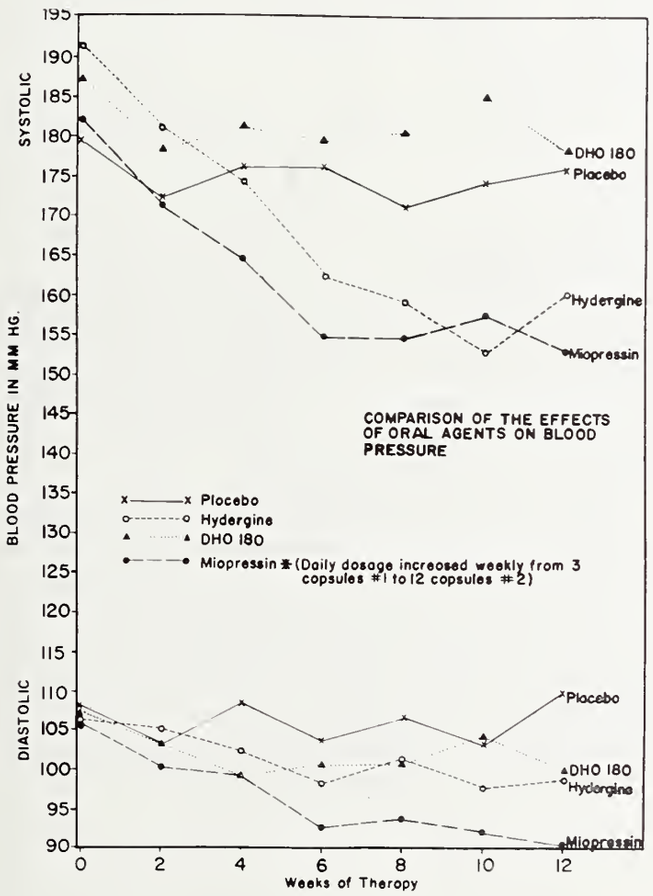

Figure 2. The effects of oral agents on blood pressure.

Aside from the measured blood pressure changes, the subjective feeling of the patient generally seemed to improve regardless of whether or not the patient was receiving drug or placebo either parenterally or orally. The instance of side effects has been surprisingly low, and in no case has it been necessary to alter the routine of therapy because of these effects. A detailed analysis of the effect on symptoms will appear in a subsequent report.

If any doubt previously existed as to the necessity of employing the double-blind method in the field of hypotensive agents, I feel that this study clearly demonstrates its value. As has been noted, a marked prolonged hypotensive effect is caused by the administration of a placebo parenterally.

In addition to demonstrating placebo effect, a previously non-existent base line has been established for parenteral and oral drug and placebo in hypertension.

SUMMARY

1. A controlled double-blind study of 84 clinic outpatients is reported.
2. Repeated blood pressure determinations were made before and during the administration of these substances.
3. Patients studied have been stage I, II, and III (Schroeder).
4. Blood pressure effect:
   a. Up to 55 weeks of parenteral placebo administration, there was a significant decrease in the systolic blood pressure. Up to 135 weeks, there was a significant decrease in the diastolic blood pressure (p was less than 0.05).
   b. In those patients receiving the hydrogenated alkaloids of ergot parenterally, there was a significant decrease in the systolic blood pressure for 55 weeks. There was a significant decrease in the diastolic blood pressure from the 1st through the 135th week.
   c. In patients who received the oral placebo there was no consistent significant change in the systolic or diastolic blood pressure.
   d. In patients who received the oral dihydroergocornine there was no significant decrease in the systolic or diastolic blood pressure.
   e. In patients who received the oral hydrogenated alkaloids of ergot there was a significant persistent decrease in systolic blood pressure and diastolic blood pressure.

f. In patients who received Mio-Pressin there was a significant decrease in systolic and diastolic blood pressure. ★★★

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Small Fry Baseball Said Health Hazard

Two midwest physicians warned that Little League baseball can present situations harmful to the health of participating youngsters. Drs. Thomas E. Shaffer, Columbus, Ohio, and John L. Reichert, Chicago, said that there are undesirable features in organized baseball among small fry but neither disagrees with the underlying theory that Little League activity can promote healthy competition.

"No informed person will deny that competition is an essential part of every child's education and growth," Dr. Reichert said in the American Medical Association magazine.

"But it is equally true that competitive drives must be allowed to develop normally and not be overstimulated or suppressed, so that as the child matures, competition and cooperation are balanced forces in his personality," he said. "A child can best be developed in respect to posture, coordination, strength and control, and emotional balance by a process of gradual training during the years of physiological immaturity, not by the forced development of special athletic skills."

With regard to injuries, Dr. Reichert said. "Preadolescent and adolescent children are in a vulnerable age.

"During this age there are periods of rapid growth with temporary maladjustments and weaknesses. During these periods, the child is particularly susceptible to dislocations of joints and to bone injuries."

Dr. Shaffer said athletic competition for children is undesirable when organized along adult patterns. In such cases, he said, the unavoidable emphasis placed on winning puts too many pressures on children.

". . . competitive physical activities for this age group are desirable provided they are conducted with due regard for developmental characteristics such as short attention span, variations in physical skills, and a natural tendency to disregard need for rest and relaxation," he said.

"Most of the undesirable features of the little leagues could be eliminated by discontinuing sponsorship of teams by business organizations, by eliminating tournaments except on a community-wide championship schedule, by requiring medical examination at the start of a season and during the season if accident or illness occurred, and by requiring trained, experienced individuals in positions of leadership."

Prostheses and Sutures For Repairing Abdominal Wall Defects

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Dr. Koontz, an experienced and widely read researcher and author in the field of prostheses and sutures for repairing abdominal wall defects, discusses past, present, and future materials. He concludes that silk and cotton are the best general purpose suture materials available at present, but points out that marlex, a new plastic now under experimental trial, promises to be better than either.

THERE ARE SOME EXCELLENT SURGEONS who belittle the notion of using prostheses in the repair of defects in the abdominal wall. It is generally conceded, however, by most surgeons that there are cases in which the defects are so large, or the tissues so poor, that a cure cannot be obtained without the aid of a prosthesis. Scores of surgeons have found them an invaluable aid in the repair of larger hernias, some of which are a challenge to the resourcefulness of even the most competent.

There are those who feel that fascia transplants should be used in the place of foreign prostheses. For many years I used both preserved and autogenous fascia to repair tissue defects and myself introduced the use of ox fascia in hernia repair in 1926.[1, 2]

'THE LORD'S HANDIWORK'

One year at a meeting of the Southern Surgical Association in discussing a paper on tantalum, my old friend Dr. Gallie of Toronto, who had introduced "living sutures" some years before,[3, 4] said, "Why try to improve on the Lord's handiwork? Why not use fascia?"

In closing the discussion I told the following story, which I thought apropos: A Methodist circuit rider in the mountains of North Carolina was visiting one of his many church members on a Sunday afternoon. He and his mountaineer host were leaning up against a rail fence chewing tobacco and spitting copiously. Finally the parson noticed that the mountaineer had a nicely weeded patch of corn up against the almost perpendicular mountainside. The parson said, "Sam, you and the Lord have done mighty well with this place, haven't you?" Sam switched his cud of tobacco from one cheek to the other, spat deliberately, and replied, "Yes, parson, but you ought to have seen this here goddam place when the Lord was running it by himself."

The moral to this story is that every now and then mere surgeons have to try to improve on the Lord's handiwork. When they are called upon to do so they would be recreant to their duty if they did not use the material with which they thought they could get the best result. I have been able to get better results with tantalum than with fascia, because in the presence of infection fascia sloughs out and love's labor is lost.

PROSTHESES: NO SUBSTITUTE

It goes without saying that prostheses are not a substitute for good surgery. In fact, no one but good surgeons should use them. We could go a bit further and say that no one but good surgeons should operate at all. That is a truism hardly worth repeating. In spite of this, one often sees hernia cases which have been operated on several times before by the same surgeon. Patients often report these surgeons to have said, when they discovered the last recurrence, "But I used mesh the last time so I don't see how it could have recurred." There is no magic in "mesh" or in any other thing that the surgeon uses. The magic is in the hands and head of the surgeon. If his judgment is good and his dexterity sufficient, he will be able to get

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cures by many different methods. Some methods work better in the hands of some surgeons than in those of others. Naturally, each surgeon should use the method with which he gets the best results.

FIRST WITH THE NEW

Unfortunately, there are some surgeons who will jump at any new thing that comes out and start using it right away without first finding out whether it has been properly tested or not, or what advantages or disadvantages it has over other already tested methods. Stainless steel gauze came out some time after tantalum gauze had been used successfully for a considerable period of time by a number of eminent surgeons. I know some rather good surgeons who started using it immediately without troubling to find out the difference in the tissue reactions to the two materials. When asked why they were using it, they replied, because it was cheaper. It is true that stainless steel is slightly cheaper than tantalum, but when a patient has an abdominal wall defect which is so serious (and possibly several times recurrent) as to require the use of a prosthesis, does anyone think that he would appreciate having his surgeon skimp on a few dollars in the effort to cure him? These patients want to be cured! They are not thinking about the matter of a few dollars. They have already spent possibly hundreds of dollars in an effort to obtain a cure. This time they want to leave no stone unturned to see that the result is good.

"DON'T THINK—TRY"

Someone once asked the great English experimental surgeon John Hunter what he thought of something. His reply was, "Don't think. Try." When new things come out, the first thing to do is to try them out experimentally in order to find out what the tissue reactions to them are. Not everyone can be an experimental surgeon, but everyone can read the reports of experimental surgeons and thus ascertain the facts before they start using some new material or new method.

Much experimental work has been done on prostheses of all sorts and the results are in the medical literature. Koontz and Kimberly have published the results of experiments showing the tissue reactions to tantalum and stainless steel[5, 6, 7] as well as those to many plastics.[8] The plastics include such materials as dacron fabric, dacron and nylon cloth, fiberglas, fortisan fabric, marlex, mylar, nylon mesh, orlon cloth, polyethylene, polyvinyl sponge, teflon fabric, teflon and nylon cloth, and vinyon-N cloth.

All the plastics except marlex (introduced by Usher[9]) give infinite trouble in the presence of infection. We all know what a headache an infection in such a wound is. It increases the morbidity, prolongs the convalescence, and lessens the chances of a cure. I, therefore, think it is highly important to use as a prosthesis some material which does not cause trouble in the presence of infection. This is true of marlex, which will be discussed more fully a little later. Some of the plastics were found to be very inert and caused no fibroplasia. Teflon was notable in this regard. This is a distinct disadvantage in hernia repair. Fortisan and orlon cause strong fibroplasia and soon become infiltrated with fibroblasts, provided no infection occurs. If infection ensues, the result is worse than nil. There is good infiltration by fibroblasts of dacron fabric, fiberglas, and nylon mesh, but the end result is not as strong as in the case of fortisan or orlon. All cause trouble in the presence of infection.

PITFALLS IN PLASTIC

Neither marlex, tantalum, nor stainless steel cause trouble in the presence of infection. However, it was found experimentally that marlex did not cause as much fibroplasia as tantalum and therefore did not produce as strong an abdominal wall. I have used it in only five cases clinically. Two of these were primary incisional hernias. One of these recurred 18 months after operation and the other is still well 18 months after operation. Two were twice recurrent incisional hernias and these have been well for 18 months and five months respectively since operation. The fifth case was that of a twice recurrent hiatus hernia with a large defect and dense adhesions on both sides of the diaphragm. A gastrointestinal series done six months after operation showed no evidence of recurrence. I reoperated the one recurrent case and found, as in the experimental animals, the marlex had not produced anything like as much fibroplasia as tantalum does.

The comparison of the usual commercially prepared tantalum gauze and stainless steel gauze (50 x 50 mesh—50 wires to the inch in each direction) shows a vast difference in the tissue reactions to the two materials. The stainless steel is apparently entirely inert and causes no fibroplasia at all. On the other hand, fibroblasts grow all through the meshes of the tantalum gauze and thoroughly surround it, making a very strong repair indeed. The reason that the tantalum produces fibroplasia is probably the fact that the surface of the tantalum is always covered with tan-

talum oxide and it has been shown experimentally that tantalum oxide powder produces a very strong fibroplastic action.[6] As a result, it is impossible to remove tantalum gauze after it has been implanted as long as two weeks without sharp dissection, while stainless steel gauze can be readily lifted out of the wound. It is felt, therefore, that tantalum is far superior for the repair of abdominal wall defects than stainless steel.

Some surgeons have used a loosely woven stainless steel mesh and reported good results with it. Experimentally, its implantation to repair a defect results in a very weak abdominal wall. The weave is entirely too flimsy and there is practically no fibroblastic reaction.

Tantalum, stainless steel, and marlex all undergo fragmentation in time. The fragmentation time for tantalum and stainless steel is about the same. In the case of tantalum, it must be pointed out that the tantalum is not used to cure the hernia *per se,* but simply as a scaffolding for the ingrowth of fibrous tissues. After the tantalum is thoroughly infiltrated and surrounded by fibrous tissue, a new abdominal wall is a *fait accompli.* After that, the fragmentation of the tantalum makes no difference. I once wrote to a doctor in another city for a report as to the result on a patient I had operated upon for a ventral hernia a couple of years before. The report came back that the x-ray showed that the tantalum had undergone fragmentation. The fact that the patient still had a strong and intact belly wall seemed to make no difference.

SUTURE MATERIALS

Let us dispose of catgut right off the bat and relegate it to the limbo of the never-never land. I believe that the time has come in American surgery when I can say this without having brickbats thrown at me. This was not true 30 years ago.[10] Silk, popularized by Halsted, was anathema to surgeons for many years. The reason for that was that the technique of the average surgeon was not good enough to use silk—he had too many infections and silk caused trouble in the presence of infection. That time has happily passed, and with it have passed the halcyon days of catgut. The only objection to catgut, of course, is that it is not dependable. In repairing abdominal wall defects it is absolutely necessary to have suture material which will hold important structures together until firm healing takes place. Catgut cannot be depended upon to do this. There are some who say that our cutgut has improved. That is unquestionably true, yet recent studies by Madsen[11] have shown that it is still unreliable. He showed that when silk and chromic catgut sutures were placed in fascia, they initially had the same tensile strength. After six days the silk sutures still had their initial tensile strength in nine out of nine cases, whereas only three of the nine chromic catgut sutures were reliable. What further evidence do we want, when we know that it takes from ten to 14 days to get firm healing in any wound?[12] And where is firm healing more important than in the repair of abdominal wall defects?

TROUBLE IN INFECTION

Silk, cotton, nylon, and linen are all reliable suture materials. However, they all cause trouble in the presence of infection—nylon slightly less than silk or cotton and linen slightly more. I believe there is very little difference between silk and cotton. I also prefer them to nylon because of the tendency of nylon knots to slip. Much has been said concerning the difference in tissue reactions to silk and cotton. In my experience, such differences are slight, indeed. Both are excellent sutures, but both give trouble in the presence of infection. However, I would much rather have a suture that will hold structures together until firm union takes place, even if they do give trouble in the occasional infected case. When this does occur, as a rule a sinus tract results leading down to the offending suture. This suture (or sutures) may often be fished out with a crochet needle or a very small ear curet. If not, the sinus tract may be opened under local anesthesia and the offending suture removed. Healing then takes place without dissolution of the major repair.

Wire—both tantalum and stainless steel—is excellent suture material and does not cause trouble in the presence of infection. However, they have other drawbacks which prevent their universal use. In the first place, they are much harder to handle than silk or cotton. In the second place, they do sometimes cause pain, especially when near the skin, and sometimes have to be removed. In the third place, they tend to cut through the tissues much more than silk or cotton. In my opinion, the main indication for them is in wounds which are slightly contaminated, or in which, because of some previous infection, the surgeon feels that organisms may still linger in the tissues.

NEW SYNTHETICS

Finally, there are two new suture materials which may have a place and may eventually take the place of silk or cotton.[13, 14] These are marlex and dacron. Marlex causes no trouble in the presence of infection, but the knots do have a slight tendency to slip. Dacron causes much less trouble

in the presence of infection than either silk or cotton, but does cause some trouble, while marlex causes none. These are still in the experimental stage, and it is too early to advocate the use of them definitely. What we do really need, though, is a non-absorbable, non-metallic suture material which will not cause trouble in the presence of infection. Marlex may be it!

The late Dr. J. M. T. Finney, one of the wisest and most competent surgeons I have ever known, was often heard to say that there was no such word as "always" and no such word as "never" in medicine—nothing always happened the same way and almost anything could happen. I have seen infection persist around stainless steel sutures. Others have reported its persistence around braided tantalum sutures. These are certainly unusual cases. Likewise, I have seen infected wounds in which silk was present eventually heal up without a persistent sinus tract. While it is dangerous to make dogmatic statements, we can by observation and enough experience eventually determine what will work out to the best advantage in the long run.

SUMMARY

Tantalum, in my hands, has proven to be the best "foreign" prosthesis for the repair of abdominal wall defects. Marlex, a new plastic, has the advantage, as does tantalum, of not causing trouble in the presence of infection, but the new abdominal wall produced is not quite as strong as that produced by tantalum.

Silk and cotton are at the present time our best general purpose suture materials. Marlex thread is under experimental trial and gives strong promise of being better than either because it does not cause trouble in the presence of infection. ★★★

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KILLED BY THE JOB

The job's the killer in young business executives who suffer coronary attacks. So says Dr. H. I. Russek, New York, who studied medical histories and personal habits of 100 men under 40 years of age who experienced such episodes. Heavy emotional strain and work responsibility were found in 91 cases. Most spent 60 or more hours per week working, took no vacations, were unduly worried about minor matters, and were seldom at ease. Leisure for the group was mainly limited to social, civic, and organizational functions having a relationship to business. All were found to be conscientious, but many were tough on colleagues and subordinates. And most initial attacks were fatal.

The Psychotropic Action of Perphenazine In Neuropsychiatric Patients

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Trilafon (perphenazine) was given for a period of two years to 323 hospitalized patients with affective and schizophrenic reactions, chronic brain syndrome, convulsive disorders, and psychoneuroses. Most of this group had received shock therapy; many had previous drug therapy. Of the total group of patients 81.5 per cent showed some degree of improvement. Side effects occurred in 15 per cent. Case histories and data showing the length of the psychotic period, improvement, side effects, and changes in blood pressure are given.

TRILAFON (PERPHENAZINE) is 1-(2-hydroxyethyl)-4-[3-(2-chloro-10-phenothiazinyl)-propyl]-piperazine dihydrochloride, an amino derivative of chlorphenothiazine.[1] Studies of its acute and chronic toxicity in animals revealed it to be apparently less toxic than chlorpromazine,[1] and its behavorial potency was measurably greater than that of the older analogue.[2]

Chlorpromazine and reserpine produce trophotropic predominance and thus enhance sedation, reduce muscle tone, decrease sympathetic activity, and diminish sensitivity to internal and external stimuli.[3] Trilafon appears to have certain ergotropic as well as trophotropic properties; the former are responsible clinically for the increase in initiative, muscle tone, response to sensory stimuli, affective response, and locomotor activity which frequently follows administration. However, Trilafon does not elevate blood pressure despite its arousal qualities. This action indicates the possible influence of the piperazine moiety on norepinephrine in its transmitting function in ergotropic predominance.

The greatly increased behavioral potency and reduced toxicity of Trilafon result in an extremely high therapeutic index and make possible a wide range of dosage.[4]

The exact mechanism of action of Trilafon and other phrenotropic agents is not known. It has been suggested that they operate through the chemical process of chelation, which is the formation of coordination compounds containing the ion of a metal and the ligand group, as in metal derivatives of amino acids.[5, 6] Plasma copper levels could be affected by and phrenotropic agent which enters into the chelation process. It is possible that some of these agents effect the necessary modifications of enzyme reactions and metabolism through chelation, and thus exert a neurochemical control of mental processes.

It has been suggested that phrenotropic drugs operate analogously to proteins in hormone complexes. The primary effect of protein in the biologically active molecule is to regulate the intensity and duration of the bond for essential enzymatic processes in metabolism.[7]

The possibility that these postulated inter-relationships are significant in mental disease suggests an interesting line of inquiry: which enzyme systems and their metabolites are associated with mental disease? Tyrosinase and ceruloplasmin contain copper, and this element is probably involved in oxidative deamination and transamination. Certain enzymatic reactions produce metabolites which have been found in abnormal levels in schizophrenic patients, associated with reduced levels of serotonin and epinephrine and increased levels of xanthuric acid ammonia. This suggests the existence of a type of organic psychosis which is the result of excess transamination and of another which is the result of excessive oxidative deamination.

The chelation of epinephrine with iron may be important in mental illness, and for this reason

Trilafon (perphenazine) is a trademark of Schering Corporation.

iron has occasionally been prescribed for use with phrenotropic drugs. The possible benefit to be obtained from increasing the metal intake has been suggested, but not confirmed, by experience with 42 patients who received six capsules daily of a hematinic in addition to Trilafon. There was some indication that the degree of improvement may have been greater in this group than among the patients who did not receive therapeutic iron. A more comprehensive study may show that increasing the intake of a metal will enhance the effectiveness of Trilafon.

TABLE 1

RESULTS OF THERAPY WITH TRILAFON IN 323 NEUROPSYCHIATRIC PATIENTS

No change		18.5%
Improved		81.5%
Slight improvement:	27.2%	
Considerable improvement:	21.2%	
Great improvement:	33.1%	
Side reactions		15.0%

We know that Paracelsus used copper therapeutically in mental disease during the fifteenth century; any possible benefits may have been due to the chelation process.

The pH of body fluids is the determinant in competition between the ions of metal and hydrogen for the priority of a specific metal. It is interesting to speculate on the influence of the pH on the results of treatment with phrenotropic drugs.[7]

DISCUSSION

The complacent attitude of therapists, relatives, and the general public to the idea of long-term hospitalization for the mentally ill, coupled with the crowded conditions in state hospitals, has been a problem of grave concern for many years. However, it was not until the first of the phrenotropic drugs, reserpine, was introduced in 1952 that the hope of maintaining these patients extramurally had suffcient support from any form of therapy to warrant the theory that psychiatric patients can be treated on the short-term plan of the general hospital.

Patients have remained in mental hospitals for 50 years or more; one of the author's patients has been hospitalized for 72 years. Fifteen years is not considered to be an excessive period of hospitalization for psychotic patients because it is very common. Some arrangement that will prevent mental patients from being marooned in psychiatric hospitals for years seems desirable.[8]

Long hospitalization tends to alienate the patient from his family. Each added year of hospitalization diminishes his chances of acceptance by the family after discharge. Each year he gets further behind in the advances of the world and in his ability to cope with the constantly changing conditions called progress.

Patients in general hospitals return home in days or weeks and continue treatment at home. Why should the mentally ill patient not do this also? Years of detention in a mental hospital, often distant from home, discourage frequent visits. Relatives will be more aware of their responsibility to the mental patient if they provide some of the nursing care. This places the burden on the family, where it belongs, instead of on the state, where it now rests.[8]

Years ago it was customary in many psychiatric hospitals to keep patients in bed for the week after admission and to permit no visitors during the first three months. It is difficult to imagine a beginning more conducive to 50 subsequent years of hospitalization.

TABLE 2

DURATION OF MENTAL ILLNESS IN 60 NEUROPSYCHIATRIC PATIENTS

	Percentage of Patients
6 months to 1 year	7.6
1 to 2 years	9.1
2 to 5 years	29.0
5 to 10 years	18.4
10 to 15 years	19.0
15 to 25 years	15.4
25 to 50 years	1.5

As pharmacotherapy and the biochemical approach to psychoses progress, more and more psychiatric patients will require no hospitalization at all. They will be treated in offices and clinics operated privately or by the state. Other patients will require only brief periods of hospitalization while medication is instituted and adjusted.

The patient's history and diagnosis appear to have little influence on his chances for improvement through phrenotropic drugs. Patients in all diagnostic categories have benefited, but not all patients in each category. Psychiatry has substituted diagnostic and interview procedures for treatment for so many decades that it is difficult for some therapists, long steeped in interminable categorizaiton, to devote more time to treatment than to diagnosis.

Before undertaking this long-term evaluation of Trilafon, a brief pilot study[9] of 75 patients who

received the injectible form was made as well as comparable studies[10] with other phrenotropic drugs. The double-blind technic was usually employed; however, these studies did not remain "blind" because the experienced worker was soon able to differentiate between those patients who received the placebo and those who received the active drug.

Each patient reacts differently to his life situation and, of course, to medication. The best and only valid control is the patient himself. A reliable index of the effectiveness of a phrenotropic agent can be obtained by subsequently administering, to the same patient, a placebo or another drug. In the present series, a method of comparison for the changes effected by Trilafon was obtained by referring to previous results with placebos or other drugs.

PATIENTS IN STUDY

This paper reports a study, over a period of two years, of 323 patients selected at random from eight cottages of a 4,500 bed psychiatric hospital. The patients were all chronically ill women with psychogenic disorders such as affective and schizophrenic reaction, chronic brain syndrome associated with senile disease of the brain or cerebral arteriosclerosis, convulsive disorders, or psychoneuroses. Patients with schizophrenic reactions constituted 75 per cent of the group; all four Kraepelinian types were represented.

TABLE 3

IMPROVEMENT IN 60 NEUROPSYCHIATRIC PATIENTS AFTER THERAPY WITH TRILAFON

Symptom Category	*Percentage of Improvement*
Inadequate self care	66
Disturbed eating habits	58
Disturbed sleep patterns	55
Disturbed toilet habits	68
Verbosity	57
Restlessness	48
Retardation	27
Aggressiveness	49
Disturbed affect	41
Depression	66
Disturbed association with others	51
Required supervision for work and play	48
Delusions	55
Hallucinations	66
Disorientation	85
Confusion	47
Nonrelevance	50
Incoherence	35
Overall improvement	54

All patients were visited daily (except Sunday) by the author or one of the three attendants most familiar with each case, and frequent interval interviews were conducted. The mental and physical condition was determined before and after the period of medication with Trilafon and daily during administration. Ward and office records of each patient's progress were maintained together with daily sleep charts and reports.

In addition, 60 of these patients, including some from cottages housing the most seriously disturbed paranoid schizophrenics, were evaluated according to the IBM rating scale[11, 12] in an attempt to assess quantitatively the qualitative effects of Trilafon.

TABLE 4

EFFECTS OF TRILAFON ON BLOOD PRESSURE IN 60 NEUROPSYCHIATRIC PATIENTS

Average systolic blood pressure before treatment	145 mm./Hg.
Average systolic blood pressure after treatment	133 mm./Hg.
Average drop	12 mm./Hg.
Average diastolic blood pressure before treatment	76 mm./Hg.
Average diastolic blood pressure after treatment	67 mm./Hg.
Average drop	9 mm./Hg.

After the preliminary interview, orders were given for the institution of therapy with Trilafon. Dosage was begun at 16 mg. daily, increased or decreased gradually according to response. In patients who showed considerable improvement, the dose was reduced to the lowest possible level consistent with maintenance of improvement. The average therapeutic dose was 32 mg. daily. The largest amount given daily was 96 mg., and the lowest maintenance dose was an 8 mg. repeat action tablet once daily. Unless such dosage forms were used, administration was in three to six divided doses daily. Patients who refused medication were given Trilafon parenterally until they accepted it orally. Neurotics require less medication than do psychotics; 4 mg. daily is often sufficient for improvement.

DOSAGE

Any evidence of side reaction, improvement, or worsening was recorded carefully. Before each subsequent dose of Trilafon, each patient was observed for indications of overdosage. Attendants were instructed to stop medication at the first sign of any indisposition, at least until the patient could be examined by a physician.

At the conclusion of the study, the premedication evaluation was compared with evaluations made during and after therapy to determine the effect of Trilafon.

As soon as a patient improved sufficiently to be sent home, a member of the family was contacted, apprised of the improvement, and requested to call for the patient. A prescription for the maintenance dose of Trilafon and a card of instructions were sent home with the patient. The instructions were to take medication regularly, participate in activity, and visit the family physician for frequent and regular examinations. We also requested each patient to return to the hospital for examination every six weeks, but few kept these appointments. Patients were advised to obtain blood counts frequently but, again, few did so.

The patients usually continued to take Trilafon, as prescribed, at home. Those who return to the hospital regularly report that they have done this for as long as 22 months.

RESULTS

The results of therapy with Trilafon in the entire series is summarized in Table 1. Improvement was considered "slight" if self-care, cleanliness, resistance, mutism, and blocking were decreased, with or without persistence of delusions and hallucinations. "Considerable improvement" indicates a more marked degree of response in these areas. A return of the capacity for complete self-management in all areas and the absence of all psychotic manifestations such as delusions and hallucinations was graded as "great improvement."

In the 60 patients whose reports were processed by the IBM computer, the average age was 40 years and the average period of hospitalization was six years. The duration of mental illness in this group is shown in Table 2. Before treatment 81.3 per cent were considered to be in poor condition. After treatment with Trilafon only 15 per cent were still in poor condition. None of the patients was normal before treatment; after treatment 37 per cent were considered normal. The types and degrees of improvement are summarized in Table 3.

The effects of Trilafon on the blood pressure in these 60 patients are shown in Table 4. There was an average drop of 12 mm./Hg. in the systolic blood pressure and an average drop of 9 mm./Hg. in the diastolic blood pressure presumably due to the medication.

Side effects, all amenable to adjustment of dosage, occurred in 15 per cent of the 323 patients. Discontinuing administration of Trilafon for a single dose or for a few days, and then resuming therapy at a lower level, was all that was necessary to reverse any of the side effects encountered.

Because of our close attention to possible side effects, especially during the early weeks of therapy, the Parkinsonian syndrome which has been reported by other authors was averted in our series. The most common untoward reaction among our patients was a coarse tremor of the muscles, particularly those of the fingers and toes. Other side reactions included excessive drowsiness, drooling, motor restlessness, dystonia, ataxia, and hypotensive syncope.

CASE REPORTS

Case 1: This catatonic patient was admitted to the hospital from a private sanatorium in 1953. She was then 18 years old and had been in the eleventh grade at school. Electroconvulsive and insulin coma therapies were instituted. The patient was silly, querulous, and unpredictable; she suffered from delusions, hallucinations, feelings of unreality and depersonalization, and ideas of reference. She was antagonistic toward her mother whom she had kicked and threatened with a knife. She was occasionally mute, depressed, or suicidal. Insomnia was bothersome, and her erotic tendencies were so marked that constant surveillance was necessary.

In 1955 therapy with reserpine was begun and in 1956 she began to reseive 50 or 100 mg. chlorpromazine four times daily. Methylphenidate was administered briefly but was discontinued because of restlessness. Meprobamate, 400 mg. four times daily, was added to the regimen and the dosage of chlorpromazine was decreased. In September, 1956, she began to receive 4 mg. Trilafon four times daily, gradually increased to 16 mg. four times daily. After one month of therapy, improvement was marked and the dosage was reduced to 8 mg. four times daily, and this became her maintenance dose. Improvement continued until she appeared normal to her family. She remained in the hospital for some months, improving her typing and working in a cottage for disturbed elderly women, and was relevant, coherent, and kind to everyone, including her mother. The delusions and hallucinations did not recur and affect appeared normal.

She was discharged in March, 1957, with instructions to return to the hospital for monthly interviews. This young woman has since been graduated from a school for beauticians, and she has passed the state board examinations. She continues to take 8 mg. Trilafon four times daily and 400 mg. meprobamate at night.

Case 2: A catantonic schizophrenic patient was referred to this hospital from a private sanatorium in 1949. She was then 31 years old, married, and the mother of three children. The patient received many electroconvulsive and insulin coma treatments which lessened her impulsive assaultiveness. She re-

mained irritable, untidy, and disinterested in her family, work, and recreation. She would not bathe or keep her clothes fastened.

Reserpine, administered in 1955, lessened the assaultiveness. In September, 1956, we began treatment with Trilafon, 4 mg. three times daily. After three months this was increased to 8 mg. and then to 16 mg. three times daily. After another month the dosage was reduced to 4 mg. three times daily, and she also received chlorpromazine, 50 mg. and then 100 mg. four times daily. By March, 1957, there was sufficient improvement to warrant a leave of absence. The patient at this time was relevant, oriented, agreeable, and neat; she worked well and participated in recreational activities.

This patient now returns for an interview each month. Her maintenance medication is 4 mg. Trilafon and 25 mg. chlorpromazine twice daily. She cares for her home and family, drives the car, sleeps well, dresses beautifully, and has a pleasing disposition. Her family considers her normal.

CASE 3

Case 3: In 1941 this patient, then 24 years old, became very nervous and indecisive and had difficulty in concentrating. She made a suicide attempt. For the following three years she was a patient in private hospitals, where her conduct was variable. At times she was cooperative, pleasant, and gentle; at other times she exhibited sudden, violent behavior when she would throw things and become highly resistive and assaultive at attempts to control her. At times she was mute and depressed, exhibited blocking, slept poorly and ran around the hall at night. She received hydrotherapy and electroconvulsive therapy continually, with slight temporary improvement.

In 1945 she was admitted to the state hospital where her symptoms remained substantially unchanged. Because of assaultive and suicidal tendencies much of her time was spent in the violent ward.

In 1956 the patient received chlorpromazine and meprobamate, and there was considerable improvement. She left the hospital and secured a position, but returned because of nervousness. The therapy at this time consisted of 25 mg. chlorpromazine and 4 mg. Trilafon four times daily, plus 25 mg. iproniazid and 400 mg. meprobamate twice daily. She improved to the extent that she was able to perform full secretarial duties in an office of the hospital.

After 16 years of almost continuous hospitalization, she received a leave of absence in October, 1957, on a maintenance regimen similar to that described above except that iproniazid was discontinued. Now 41 years old, she seems normal in every respects, earns her living as a secretary, sleeps well, and maintains normal weight.

Case 4: This patient exhibited the first gross symptoms of neurosis at the age of 16 when, for a few weeks, she was afraid to eat in the school cafeteria in the presence of fellow students and teachers. The phobia recurred during her second year at college, and she found it necessary to move from her dormitory room to a private apartment because of her fear of eating in public. She did not apply herself to her academic work and her parents feared mental deficiency. (It was later found that her intelligence was high—121—but conflicts prevented her use of it.)

She became antagonistic toward her parents, stating that her mother's constant surveillance and strict discipline caused her phobia. She became distant and disaffectionate, could eat only when alone, had difficulty sleeping, and failed in school. Her social life foundered, and she discontinued church attendance because she could not swallow the Host at Communion. A year of psychoanalysis did nothing except ameliorate slightly her antagonism toward her mother. She continued to be indolent and took no responsibility for her appearance or household duties. She usually stayed awake until the early morning, reading or watching television, and then would sleep through most of the afternoon. Her fear of eating in public precluded social activity.

When she was 27 years old, therapy was begun with 4 mg. Trilafon three times daily, increased to 8 mg., and reduced again because of restlessness. Gradually she became more sociable, cooperative, and agreeable. Her grooming improved and she obtained a position. She became more loving toward her parents and began to seek company. She resumed church attendance and became able to eat with her family at home or in restaurants. Meprobamate was administered to help regulate her sleeping patterns. She no longer prefers to be alone. The maintenance medication is a single 8 mg. Trilafon Repetab daily.

CONCLUSIONS

1. The behavioral effect of Trilafon is marked. In this study, 81.5 per cent of the patients showed some degree of improvement.

2. Side effects of Trilafon are mild and relatively infrequent. Since the drug also has a high milligram-for-milligram potency, its therapeutic index is most satisfactory.

3. Administered parenterally, Trilafon is considerably more active than chlorpromazine and no adverse systemic or local reactions occur after administration.

4. Trilafon repeat action tablets are the preferred form of oral administration among hospitalized patients and outpatients because they provide a sustained plateau of action, save time for nurses and attendants, and decrease the possibility of omitting a dose.

5. Tachyphylaxis to the slightly hypotensive action of Trilafon develops more rapidly than with chlorpromazine.

6. According to previous[13] and current experience, Trilafon in properly individualized dosage,

administered for a sufficient length of time, produced at least slight improvement in every psychiatric patient so treated.

SUMMARY

1. Trilafon is a phrenotropic drug of high behavioral potency and low toxicity. Although the chemical mode of action is not known, the formation of chelate rings may be involved.

2. The drug was administered to 323 hospitalized female patients with affective and schizophrenic reactions, chronic brain syndromes, convulsive disorders, and psychoneuroses.

3. All patients were subjected to intensive observation during the period of drug therapy. The case reports of 60 patients were evaluated with the IBM rating scale.

4. It was found that 81.5 per cent of the total group of patients were improved to some extent through administration of Trilafon. Side effects occurred in 15 per cent but were transient and mild; reduction or temporary withdrawal of medication reversed all untoward effects.

5. It was concluded that Trilafon has a most satisfactory therapeutic index because of its high potency and relatively few and benign side reactions. It is more active parenterally than orally. The preferred form of oral administration is with repeat action tablets. Tachyphylaxis develops more rapidly with Trilafon than with chlopromazine. Trilafon is effective in a high percentage of patients. ★★★

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PACHYDERM PANACEA

The psychiatrist was asked to see a patient who snapped his fingers incessantly.

"Do you consider your marriage successful?" the doctor began cautiously.

"Oh, yes (snap). I have the finest (snap) wife in the (snap) world."

"Then," continued the psychiatrist, "do you feel kindly toward your parents?"

"They (snap) were wonderful—always (snap) understanding, considerate, and (snap) affectionate."

"Well, why do you snap your fingers?"

"Simple enough (snap)," the patient retorted. "It's to keep the wild (snap) elephants away."

"Why, man, there's not a wild elephant in 5,000 miles," shot back the doctor.

"See what I mean (snap)—it really works."

Clinicopathological Conference IV

Conducted by the Department of Pathology
Mississippi Baptist Hospital
Jackson, Mississippi

The case of a known rheumatoid arthritic patient, who had received extensive corticosteroid therapy, chlorothiazide, and digitalis, is the subject of Journal MSMA's fourth clinicopathological conference. The 69-year-old white female was admitted to the Mississippi Baptist Hospital on February 1, 1960, and died on February 3. Her brief hospital course was characterized chiefly by evidence of electrolyte imbalance and an unexplained hyperpyrexia. Clinical and diagnostic findings are discussed and the autopsy report is given. Participants in the conference are Drs. J. Manning Hudson, Guy Gillespie, W. E. Lotterhos, Johnson Witt, Arthur St. Clair, Samuel L. Stephenson, Jr., and Clinton E. Wallace. Dr. Kenneth M. Heard, Department of Pathology, prepared the report.

THIS 63-YEAR-OLD WHITE FEMALE was admitted to the Mississippi Baptist Hospital on February 1, 1960, with a chief complaint of weakness. Her respiration had been rapid and shallow for the past four to five days, and she had run a low grade fever since January 29. She was known to have severe rheumatoid arthritis, and had been taking corticosteroids for several years. Most recently she had received dexamethasone in a dosage of 0.75 mg. one to three times daily. She had also been taking chlorothiazide for approximately one year. During much of this time the dose had been approximately 1 gm. daily, but during the past two months she had received 2 gm. daily. For the past three weeks she had had some nausea and vomiting which had been severe for four or five days prior to admission. There had been considerable edema during the past few weeks, especially of the lower extremities. She had been on digitalis therapy since January 12, 1960.

Her past history revealed that an appendectomy and hysterectomy had been performed in 1945. There had been no other serious illnesses or operations. An uncle was known to have suffered rheumatoid arthritis, and a younger brother had tuberculosis in 1941.

Physical examination revealed a markedly obese female who appeared acutely and critically ill. The blood pressure was 120/70, temperature 100° F., pulse rate 140 per minute, and respiratory rate 39 per minute. "Moon facies" was apparent. The mucous membranes appeared dry. Examination of the neck was negative. There was a faint precordial systolic murmur. The lungs were clear to percussion and auscultation. A questionable mass was felt in the epigastrium which was extremely tender. This tenderness extended down to the umbilicus. Examination of the musculo-skeletal system revealed arthritic deformities involving principally the hands and knees. There was 4+ edema of the lower extremities. The peripheral tendon reflexes were markedly diminished in the upper and lower extremities.

Admission laboratory work showed a hemoglobin of 13 gm. The corrected sedimentation rate was 39 mm. and the hematocrit 39 vols. per cent. The total white blood count was 15,600 with 89 per cent neutrophils, 9 per cent lymphocytes and 2 per cent monocytes. Admission urinalysis showed a 3+ albuminuria. It was negative for glucose. There were 10 to 15 white blood cells per high power field. There were occasional red cells and occasional finely and coarsely granular casts. Blood taken at the time of admission for electrolyte studies showed a potassium of 3 mEq. and a sodium of 138 mEq. Shortly following admission she was given 500 cc. of 10 per cent glucose in water with 40 mEq. of potassium. On the following day her potassium was 3.0 mEq. and her sodium was 134 mEq. The CO_2 combining power

was 19.3 mEq. (44 vol. per cent). Further laboratory work on February 2 showed a creatinine of 1 mg. per cent. The total protein was 4.58 with 2.9 gm. of albumin and 1.67 gm. of globulin. The blood urea nitrogen was 29 mg. per cent. An electrocardiogram showed evidence of hypokalemia and digitalis effect.

A note on February 2 at 5:00 p.m. stated that she had less nausea, but still had fast respiration and a temperature of 102°. In the meantime, in addition to further fluid therapy, she had received some solucortef. At midnight on February 2, the temperature was elevated to 106° F. Blood pressure was 120/70, pulse 160, respiration 50 per minute. She was given 2 cc. of dexamethasone and antipyretics. She was semiconscious at this time.

Her temperature fell somewhat, but by 9:15 a.m. on February 3 it was 105.4° F. Further laboratory work on this date showed a potassium of 4.6 mEq. and a sodium of 140 mEq. The chlorides were 92 mEq. per liter and the CO_2 combining power 29 mEq. per liter. She became progressively worse and died at 6:10 p.m. on February 3.

DISCUSSION

Dr. J. Manning Hudson: "The case today is that of a 63-year-old white female who had been known to have rheumatoid arthritis for some time. She had been on steroid medication for several years, probably three or four years. The exact type of steroid is not known except that more recently she had been on dexamethasone—around 1.5 to 2.25 mg. daily. In addition, she had been on chlorothiazide, 0.5 gm. twice a day and then for several weeks prior to admission to the hospital, she had been on a total dose of chlorothiazide of 2 gm. daily.

"She was admitted to the hospital complaining of weakness, dyspnea, and edema of the legs. On examination she was found to have some fever which had been noted for several days prior to her admission. She had tachycardia and some tachypnea. 'Moon facies' was present and a faint precordial systolic murmur was heard. Epigastric tenderness and possibly an epigastric mass were noted. There was 4+ edema of the ankle. The urine changes were those of albuminuria, a few red cells, and some white cells. The specific gravity apparently was not recorded. The potassium was quite low at the time of admission, and blood urea nitrogen was elevated. The patient remained in the hospital only about 48 hours. Her course was rather rapidly down hill and she expired with a very high fever. During this time the patient's electrolyte imbalance in the plasma had been corrected by the use of parenteral potassium.

"I think we should try to explain as many of the facts in the history and the objective findings on physical examination as is possible. The patient's moon facies and obesity are due to the steroids that she had over a long period of time for her rheumatoid arthritis. The edema, even though a drug such as dexamethasone was used, is an interesting item in her case. As you know, this particular drug does not have as much mineralocorticoid effect as some of the earlier steroids had, and supposedly there is not as much potassium loss and as much sodium retention. Nevertheless, this patient had developed edema. Potassium loss per se may lead to sodium retention. On occasion patients developing edema while on steroids may have a diuresis with nothing other than potassium replacement. Despite the type of steroid that she was on, this probably played a considerable part in the production of her edema.

"As to this patient's febrile illness, which I believe was the primary cause of her death, the steroid should certainly be kept in mind on two accounts. One is infection, the most notorious of which is disseminated tuberculosis, and the other is perforated duodenal ulcer. The classical symptoms of both of these conditions may be so completely masked as to make diagnosis quite difficult. In addition—in regard to this patient's low potassium—such effect that the steroid may have had was augmented to considerable extent by the

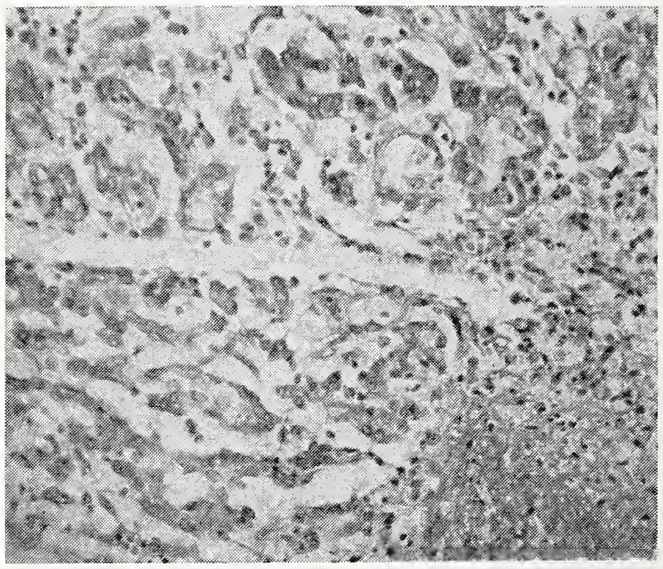

Figure 1. Section of pancreas showing marked ectasia of acini and zone of fat necrosis with mild inflammatory reaction.

chlorothiazide which she had been receiving. I think it is also worth commenting here that this patient had been receiving digitalis prior to the time of admission. In the face of a low potassium such as this woman was shown to have, digitalis toxicity becomes quite a hazard.

"The patient's renal lesion may be quite interesting. Relman and Swartz[1] recorded some time ago an interesting vacuolar degeneration of the renal tubules associated with prolonged potassium depletion. Most of these patients had chronic diarrhea. They developed isosthenuria with a fixed specific gravity of around 1.010 and moderate renal impairment with elevation of blood urea nitrogen and non-protein nitrogen. This process was reversible by replacing potassium loss. I think that hypokalemia played some part in this patient's renal findings. However, I do not believe the renal lesion was significant from the standpoint of cause of death.

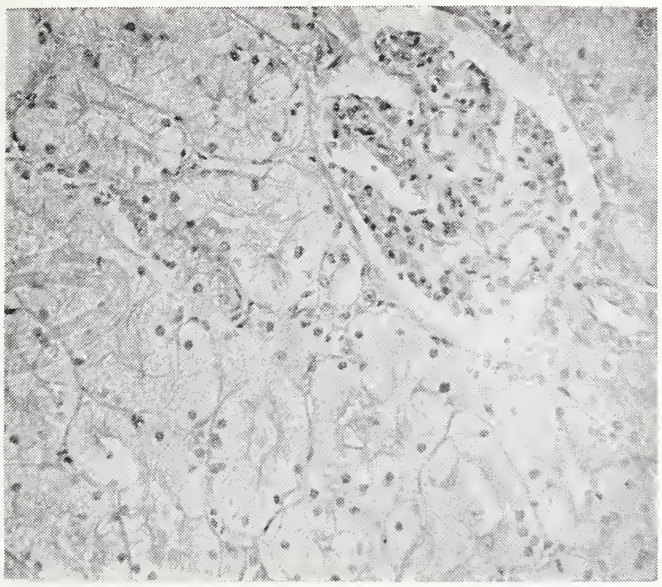

Figure 2. Section of kidney showing extreme "foamy" swelling of tubular epithelium.

RESOLUTION INTO TWO POINTS

"Now as far as the cause of death of this patient is concerned, I believe that it will resolve itself essentially in the discussion of two points: 1. a ruptured duodenal ulcer, which may have been produced by prolonged steroid medication, 2. a disseminated tuberculosis. Because this patient was so critically ill and hospitalization was quite short, she did not have any definite findings of either one of these two conditions. Also, some of the findings could be masked by the steroid therapy. Her epigastric tenderness, pointing somewhat toward a duodenal ulcer, was not accompanied by any marked rigidity or abdominal distention, and it would seem to me to be unlikely that this patient should have a ruptured duodenal ulcer. As far as disseminated tuberculosis is concerned, I think we can only speculate. There was no anemia present at the time of her admission, although I am sure that she was moderately dehydrated. The course from the time of onset of her fever until death was relatively short for disseminated tuberculosis. Her sudden hyperpyrexia with death was really quite abrupt. Nevertheless, I think this would be a symptom that would more likely be masked by steroid therapy. Only when she was admitted to the hospital and her steroids stopped did this really come to light.

FINAL DIAGNOSIS

"My final diagnosis in this patient is going to be disseminated tuberculosis as the cause of death. In addition, I think that other findings will be noted at autopsy. She will probably have extensive osteoporosis almost without question. There will probably be considerable adrenal cortical atrophy, secondary to the steroid medication, and I think that she will have a vacuolar degeneration of the renal tubules due to prolonged potassium depletion."

Dr. Guy Gillespie: "Have you explained the fever?"

Dr. Hudson: "Disseminated tuberculosis usually is associated with very high fever, I believe."

Dr. W. E. Lotterhos: "What did you think this questionable tumor mass in the epigastrium was?"

Dr. Hudson: "I have a big question mark by that. The tumor, which was evasive to the original examiner, would also be evasive to me, Dr. Lotterhos. I don't believe that I can explain the tumor mass. The patient's abdomen was quite obese and tender, and I think the original examiner himself only made the suggestion that there might possibly be a tumor mass in the epigastrium. Is that not correct?"

Dr. Kenneth M. Heard: "Yes, there was a 'questionable mass' as recorded."

Dr. Johnson Witt: "It felt as though there might be some edema of the abdominal wall. The abdomen was a little distended. In the epigastrium there was this mass shaped something like a four months' uterus upside down. That is the best way I can describe it. There was a good deal of tenderness associated with this."

Dr. Arthur St. Clair: "How long had she been off the steroids before the fever shot up?"

Dr. Heard: "Approximately 24 hours."

Dr. Samuel L. Stephenson, Jr.: "I believe that as the result of the fever they were reinstituted."

Dr. Gillespie: "I'd like to know what possibility there might be that this mass represented a very large lobe of the liver, with the idea in mind that since there is the possibility of disseminated tuberculosis, there may be a constrictive tuberculous pericarditis."

Dr. Hudson: "The protocol recorded that an electrocardiogram was done, and this electrocardiogram showed evidence of hypokalemia and digitalis effect. It did not show any evidence of an acute pericarditis."

Dr. Clinton E. Wallace: "Did she have a chest x-ray?"

Dr. Heard: "A chest x-ray was not done, presumably because of the patient's critical condition."

Dr. Wallace: "In people who have taken steroids over a long period of time, the incidence of acute pancreatitis is considerably higher. This might possibly explain this mass. If she had had an episode say a month or two before, the mass possibly might be a pseudo-cyst or something of that type."

Dr. Hudson: "I think Dr. Wallace's point is well-taken, and I think it is a point to be considered. On the other hand, her course over a considerable period of time prior to admission to the hospital, the failure of the patient to go into shock, and the absence of recorded abdominal rigidity or resistance leads me not to consider acute pancreatitis strongly."

PATHOLOGICAL DISCUSSION

Dr. Heard: "The gross findings at autopsy of course confirmed the clinical impression of extreme obesity. The heart was essentially negative and weighed 325 gm., which is not too much for a patient of this size. The lungs were negative with a total weight of 675 gm. The adrenals were somewhat under weight with a total weight of 8 gm. The cortices were dark brownish-yellow. The kidneys were quite striking grossly, weighing 180 and 190 gm. respectively. They were very pale, light yellowish or grayish tan. When the capsule was stripped away, a considerable amount of parenchymal tissue was adherent to the stripped capsule. The renal tissue throughout was quite soft. The liver weighed 1,900 gm. and was swollen, yellowish-tan, and rather greasy, being interpreted grossly as a fatty liver. In and around the pancreas, but more particularly in the peripancreatic tissue, were chalky white zones of obvious fat necrosis. The pancreas was swollen and somewhat indurated. This was not, however, a picture of acute hemorrhagic pancreatic necrosis.

"Microscopically, the chief interest centers around sections of the pancreas and kidneys. In the pancreas there are zones of fat necrosis with moderate inflammatory reaction and ectasia of the pancreatic acini. (Fig. 1.) Both of these lesions have been noted in association with corticosteroid therapy. Corone and Liebow[2] reviewed a series of patients who had steroid therapy for over three days—three days to several years—comparing this with a control group who had none. Acute pancreatitis and/or fat necrosis was present in 16 of the 54 patients and the duct ectasia in 32 of the 54 cases. The pancreatitis was mild to moderate, as in this case. I do not believe that the degree of pancreatitis in this case, which had probably been present for 10 days to two weeks, was sufficient to account for either the hyperpyrexia or the patient's demise. As a matter of fact, we do not have anatomical findings to explain either.

"The kidneys showed changes in the epithelium of the proximal and distal convoluted tubules that have been described in association with potassium depletion. The cells are extremely swollen and "foamy" in appearance. (Fig. 2.) As Dr. Hudson stated, these changes may be associated with moderate impairment of renal function—both tubular and glomerular—although the glomeruli usually appear normal, as in this case. Other microscopical findings confirmed the gross impression of an extremely fatty liver, adrenal cortical atrophy, and osteoporosis."

SUMMARY

A case has been presented of a known rheumatoid arthritic patient who had received extensive corticosteroid therapy, chlorothiazide, and digitalis. Her brief hospital course was characterized chiefly by evidence of electrolyte imbalance and an unexplained hyperpyrexia. The final pathological diagnoses were:

1. Interstitial pancreatitis and fat necrosis; acinar ectasia of pancreas.
2. Nephropathy of hypokalemia.
3. Rheumatoid arthritis.

★★★

1190 North State Street

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Income and Death: A Narrowing Gap

ROWLAND B. KENNEDY
Jackson, Mississippi

The gross economic product of a state seems to be exerting a progressively lesser influence on the mortality rate, except, perhaps, in perinatal mortality. Where once the richer states enjoyed a lower death rate than the poorer ones, there is less than 1 per cent over-all difference today while the economic gap also closes. Thus, the central thesis of this study is a contention that income is not now nor was previously the decisive factor in mortality. The conclusion is that three decades hence, there may be no basis at all for mortality-income comparison.

EVERYBODY KNOWS that the average American is living longer but few have thoughtfully analyzed declining mortality during the past three decades to determine if socioeconomic factors operate to influence longer life. The extent of mortality reduction during the past 30 years varies from state to state and among major population segments but all have shared in this happy experience. The tendency toward proportionate similarity may be related directly to scientific advancement in medical care, particularly as regards chemotherapeutics and surgical technic. Of equal importance is the rapidly advancing level of competency found in the American physician because the excellence of undergraduate and postgraduate medical education is a primary factor in the longer span of life.

Differentials in mortality rates among states are narrower than ever before but generally, mortality decline has been greater where the death rate was formerly higher. This is particularly true in the so-called low income states where the gap has been closing almost dramatically in just 30 years. Today, the over-all mortality in lower and higher income states is virtually identical. Interestingly enough, this over-all similarity seems to be a product of contrasting ratios at either end of the age scale. In states with a lesser gross economic product and consequently lower income, perinatal death is somewhat greater than in states with greater wealth production. The same is true —but to a much lesser extent—for the age group 45 through 64. Above age 65, the death rate curve tends to swing upward more sharply in the high income areas and causes of death appear to vary by economic division.

During the period 1949-1951, the death rate from all causes among white males in the United States was 967.6 per 100,000 on an average annual age-adjusted basis of computation. The New England states showed 959.0 in contrast with a rate of 983.6 for the Pacific coast. The highly industrialized Middle Atlantic area experienced 1,009.8 as opposed to the deep South's 948.9, described demographically as the East South Central group. West North Central's mortality was 878.8 in comparison with 975.7 in the Mountain States.

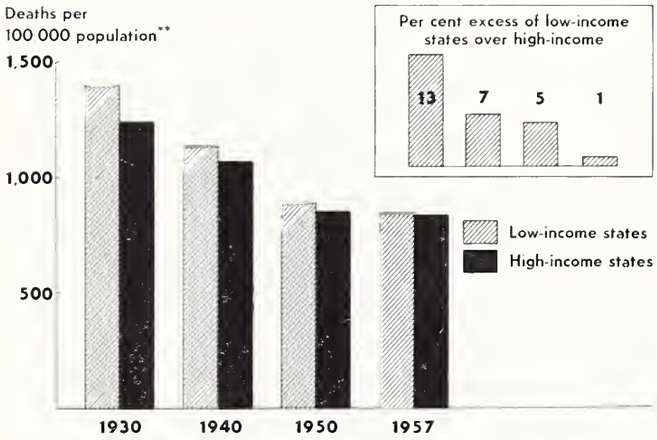
The Mississippi State Board of Health reports an over-all crude death rate based on 1958 population estimates of about 999 per 100,000 with the non-white rate 3.5 per 1,000 greater than that for whites. These data represent an increase of about 3 per cent over the preceding year.

Executive Secretary, Mississippi State Medical Association.

The Health Information Foundation, a non-profit research organization supported by contributions from industry, made a unique study of the mortality-income relationship by comparing gross differentials among large geographic and population groups. This approach contrasts sharply with usual studies aimed at demonstrating differences in economic or "social classes" where mortality patterns are compared to occupation groups.

Dr. George Bugbee, president of HIF, has this to say: "The last few decades have given us con-

Mortality in Selected Groups of States With Highest and Lowest Per Capita Incomes* United States, Selected Years



*Average per capita personal incomes.

**All rates are age-adjusted to U.S. population of 1940.

vincing proof that increased spending on health pays big dividends in reducing mortality rates and communicable diseases among the American people. Since 1930, for example, the over-all U. S. death rate has declined by 37 per cent. In roughly the same period, the per cent of each consumer doller spent for medical care has risen.

"All states, rich and poor," he continues, "have shared in the general improvement. But as (our studies) point out, relatively the greatest gains in health levels have been made by the states at the bottom of the economic scale. In 1930, mortality rates in the 10 states with the lowest average income per capita were 13 per cent higher than those in the 10 wealthiest states. Now the gap has almost closed. Death rates in the 10 poorest states in 1957 are less than 1 per cent higher."

MATERNAL AND INFANT MORTALITY

The rate of death for those under one year of age is considered by many to be a sensitive index of environmental conditions in a given geographic area. Although a substantial differential in this respect still exists among the several states, the gap has narrowed notably since 1940. The same trend is true for maternal mortality but this decline has been even more dramatic.

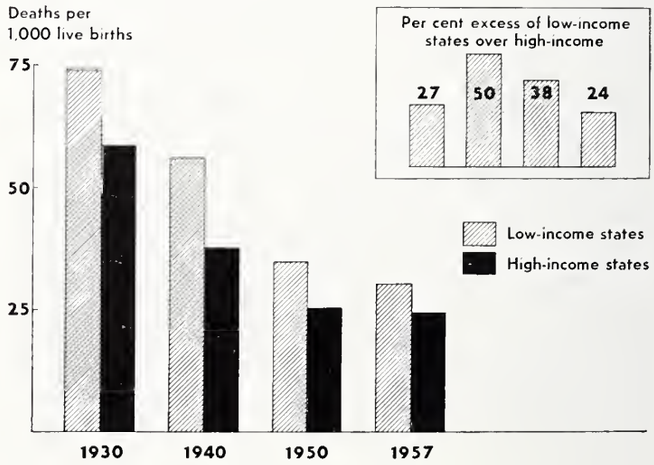
Newton reports that in 1930, 67.3 women died per 10,000 live births. In 1955, he states, the maternal death rate was 4.7 per 10,000 live births. In addition to scientific medical advances, he suggests that better medical and related facilities—surely, an economic concern—are contributing to this fortunate decline.

Thirty years ago, infant mortality in the so-called low income states averaged 74.2, an excess of 27 per cent over the richer commonwealths. By 1940, the rate in both economic groups had declined substantially but the decline was less rapid in low income areas. Today, it is estimated that this excess differential is between 20 and 23 per cent but the important aspect is that the rate continues to decline. The author interprets this pattern as a lag in mortality decline acceleration rather than as a static economic differential. Based upon demonstrable trends of 30 years, it seems reasonable to postulate that income differentials may be virtually erased in the mortality comparison picture.

THE CLOSING GAP: BUT WHY?

Some may contend that federal health programs account for the narrowing gap in mortality between the rich and poor areas but the nature and structure of federal fund allocations effectively counters this fallacious argument. Formulae utilized for amounts of funds made available to states usually contain matching and population factors. Almost invariably, the so-called bottom states are smaller population-wise and have less state monies with which to match the federal "grant."

Infant Mortality in Selected Groups of States With Highest and Lowest Per Capita Incomes* United States, Selected Years



*Average per capita personal incomes.

The over-all economic posture of a state will exert some influence upon construction and expansion of medical and related facilities. Except for a pronounced shortage of such facilities, how-

ever, their actual presence by geographic area may be less important than is commonly supposed. This is substantiated by the fact that medical care doesn't stop at political subdivision boundaries. Other seemingly unrelated factors enter into these considerations, too. Among these are improved communications between population centers, effective local programs of medical care for the indigent, and a growing awareness of health maintenance responsibility among all citizens.

Finally, geographical economic variations probably exert only insignificant influence upon professional competency. To begin, medical education is astonishingly uniform and a physician in a "depressed" area will have the same basic training as one in a wealthy precinct if both were graduated at about the same time. Scientific communication is intense with periodical media, medical meetings, and quality consultation among the more ubiquitous quantities in modern society.

Dr. Bugbee observes that ". . . concomitant with this (mortality) trend, the poorer states have been catching up with the wealthy in income levels. In 1930, the per capita income for the 10 wealthiest states was more than three times the average for the 10 poorest; now the average of the top 10 is less than twice that of the bottom 10 states." This strongly suggests that three decades hence there may be no basis at all for mortality-income comparison. ★★★

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INFORMATION PLEASE

March 4, 1960

Dear Doctor Harper: I enclose my check in payment for last month's statement, but have a few questions about it. We understood that house calls are only $5 each—did the two calls on February 8 and 10 include Trudi's penicillin shots? And what about that item, "Treat ent."? I can't remember her having anything called "ent." Mr. Brown says perhaps this is the medical term for eczema, but didn't we bring her in for that back in December?

We are delighted with Trudi's progress since the tonsillectomy, and feel that the fee is very fair, indeed. Is the extra charge for the anesthetist or for the oral surgeon who extracted those baby teeth during the operation? It really doesn't matter; we're just curious.

Thank you for any explanation you can give us. We'll be seeing you in a few weeks when Trudi has her puppies.

Very truly yours,
HILARIE BROWN (MRS. R. E.)

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Unmarried Paren

At one time or another during his practice, almost every doctor comes face to face with the unmarried mother problem. Issues which seem simple when discussed in legislative halls and from the church pulpit become complex in the specificity of the examination room. How to help an unmarried mother may be the most difficult decision of a physician's career.

It was the last appointment in a busy day when Dr. Grayfield walked into the examination room to see Jean. "Sorry to have kept you waiting, young lady," he said as he glanced over her record, "but you know how it is on Saturday—everybody comes to the doctor with the whole week's troubles.

"Now what can I do for you—you're not coming down with the measles like the rest of the kids at the college, are you?"

"I'd give anything if it were the measles, Dr. Grayfield," Jean blurted out. "I think I'm pregnant."

A brilliant student, Jean had grown up in an unhappy family situation. Her parents had been divorced and remarried when she was very young, and she had been shuttled back and forth between them most of her life. While staying with her mother the previous summer, she had become intimate with a friend of the family. She discovered her pregnancy soon after she arrived at college. Away from the meager security of her two homes, she turned to the doctor for help.

In the United States last year, more than 200,000 accountable babies were born out-of-wedlock. Since many out-of-wedlock births are not reported and some cities do not record illegitimacy,

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Editorial Assistant, Journal of the Mississippi State Medical Association.

All cases reported in this study are from the files of the Hinds County Welfare Department, Jackson. Names have been changed to protect identity.

cial, Medical Dilemma

BETTY MILLER
Jackson, Mississippi

this is probably only a fraction of the true number. Once a subject confined to barroom ballads and back alley conversation, the unmarried mother has become a concern of society generally and doctors, lawyers, legislators, and social workers specifically.

Numerous studies have been run on the problem. One of the first in Mississippi was a selected sample survey conducted by the Committee on Maternal and Child Care, Mississippi State Medical Association, for the Community Services Council. Questionnaires were mailed to 230 Mississippi doctors, 18 per cent of MSMA's membership. Out of these, 107 physicians did not complete their forms, 25 reported seeing no unmarried mothers, and 11 stated they conducted no obstetrical practice. The remaining 87 physicians reported they saw a total of 254 unmarried pregnant white women during 1955.

Data from the study showed that approximately seven out of ten of the unmarried mothers interviewed first sought medical advice in their local communities. In about seven out of ten cases they chose to leave the community to have their babies. A minority—three out of ten—were delivered in their own communities by local physicians. Chief concerns of the unmarried mothers covered in this study were concealment of pregnancy, future of self, financial need, and future of child.

Who are the unmarried mothers that produce the yearly bumper crop of 200,000 out-of-wedlock babies? At the turn of the century the unwed mother was generally thought to be a mentally deficient woman from "across the tracks" who "just didn't have the sense to know better." Welfare records, however, indicate that unmarried mothers come from all sides of the economic track and have varying levels of intelligence. The greatest change in the age-old problem has been

Illustrated by Robert P. Adams

the increased rate of illegitimacy among "nice" girls—college co-eds, career women, popular teen-agers, and married women.

YOUNGER UNWED MOTHERS

Unwed mothers seem to get younger every year. Seventy per cent are under the age of 25 and the largest five year grouping is from 15-19. In Chicago where nearly 9,000 illegitimate children were born last year, teen-agers account for 25 per cent of the total number of unwed mothers. Board of Education figures show between 450 and 500 quit school in Chicago each year because of pregnancy. The Chicago Family Service Bureau, which handles a case load of some 1,000 unwed mothers a year, reports that the median age level has dropped in 10 years from 16½ to 14½ and some are as young as 11.

Why do girls get pregnant out-of-wedlock? There seem to be two general reasons: Some come from cultural backgrounds which accept the out-of-wedlock child. Others, the so-called "nice" girls, have illegitimate children because of unhappy home environments and emotional difficulties.

There is no one reason why society's "nice" girls have illegitimate children. Leontine Young in *Out of Wedlock,* the basic study in this field, theorizes that the majority of unmarried mothers subconsciously want to have a baby—sometimes in rebellion against a strict home life, a dominating parent, or other environmental factors.

CASE REPORTS

Marilyn, for example, had always resented her father's sternness. A well-to-do farmer, he had been good to her materially, but had insisted on complete obedience. Often he beat Marilyn and her mother. After two years of college, she left school to take a secretarial position. She continued dating a college sweetheart, however, and eventually became pregnant by him. She did not love the boy and did not tell him she was expecting. It seemed as though she wanted the baby primarily to show her father he could no longer control her.

Marie, on the other hand, had never known her mother and father. They died when she was quite young and most of her childhood memories concerned being passed from relative to relative. In her early 20's Marie became involved with a fifty-year-old man whom she described as "the only father I've ever known." When she became pregnant, Marie felt extremely guilty and explained her situation by saying, "He is the only person who ever loved me." While her relationship with Mr. Williams was very close, Marie felt she cared for him more as the parent she had never known than as a husband. She decided against marriage and gave the baby up for adoption.

Often the doctor is the first person the unmarried mother confides in. She expects him to know what sources she can turn to for help. In Mississippi, the primary agency is the Department of Public Welfare. Through its child welfare program, the welfare department serves any mother who is not married to the father of her child and who does not want the community to know of her pregnancy.

An unmarried mother may go to the welfare department in her county of residence or any county in the state. A child welfare worker will help her make plans for maternity home care in the state or in another state if desired. Foster home care may also be arranged. From July 1, 1957, through June 30, 1958, 63 unmarried mothers were served by the Mississippi Welfare Department.

If the unwed mother does not wish to go to the welfare department, the doctor may refer her directly to a maternity home. There are approximately 150 such homes scattered across the United States which serve close to 20,000 girls and women a year. Only five states lack any home. New York City alone has 11 shelters and Chicago has four. Mississippi has two licensed homes:

Crestview in Jackson and King's Daughters' Maternity Home in Natchez.

MSMA's Council on Medical Service has set up a standard to guide physicians in judging maternity homes. The council ruled that such

institutions should be nonprofit, should have fixed rules and regulations administered by competent governors or trustees, adequate arrangements for quality medical care and protection of the mother's identity, no requirements for the mother to give up her baby, and certain standards for physical facilities. The council expressed the belief that component medical societies should exercise approval sanction for institutions located in their jurisdictional areas.

When maternity homes first started their work in the last quarter of the 19th century, they were looked upon as places of refuge and reformation. The young woman was expected to reform her morals and to keep her baby as proof of her intention to do better in the future. Most modern homes aim at helping the girl make her own decision as to what is best for her and the child. Caseworkers help the unmarried mother to think through her problem and to weigh the guilt associated with giving up the baby against the problems of supporting and bringing up a fatherless child in a condemning world.

The majority of unmarried mothers choose to give up their children for adoption. Like Doris, they feel that keeping the child would only destroy two lives. An attractive but shy 15-year-old, Doris had gone with Jack since she was 13 and he 14. Her mother was too involved in her own problems to pay much attention to Doris, and her stepfather was overly strict—disapproving violently of her steady relationship with Jack. Jack, too, came from an unhappy home environment, but got along well in school, was popular, and a leader in his class. When Doris discovered her pregnancy, she did not tell Jack because she felt they were too young to consider marriage. She released the baby for adoption.

KEEPING OF BABY

Some unmarried mothers decide to keep their babies because of the emotional difficulty involved in giving up the child or family pressure. Janice, for example, kept her child at her parents' insistence. Brought up in a strict religious community, she was not allowed to date until she was 18. Bob was the only man she had ever gone with, and she became pregnant when they had known each other only a few months. When she told Bob of her condition, he left town. She followed him from place to place until he finally told her he had claimed love in order "to get what I wanted." Janice then went to a maternity home, but her parents took her away from the shelter before the baby's delivery insisting that she keep the child "to compensate for her sin."

For the unwed mother who chooses adoption, there are three avenues open: the social agency, the black market, and the gray market. According to Harold Hagen, child welfare consultant for the American Public Welfare Association, the percentage of adoptions handled by authorized social agencies is increasing. This is partly because the public is becoming aware of the problems of adoption through the black and gray markets, and partly because states are passing legislation establishing what groups can handle adoptions, he said.

Until recently, according to Hagen, the general opinion was that the unmarried mother had a right to do what she wanted to with her baby. "And yet if a respectable, married woman had tried to go out and peddle her children to the nearest taker, she would have been in all kinds of trouble," he said.

LEGISLATION

In Hagen's opinion, the public is swinging to the belief that the baby must be protected. He said that the majority of social legislation passed in the recent sessions of state legislatures dealt with the regulation of adoption.

Already, the placement of babies by an intermediary who profits financially by the transaction (the black market) is illegal in almost all states. New legislation is being passed, according to Hagen, to regulate the gray market—the well-intentioned endeavor of an individual to bring a childless couple and a baby together.

In Mississippi there is no legal penalty for either black or gray market adoption. However, the court at its discretion may ask for investigation by an authorized social agency into a specific adoption proceeding.

The physician has an important part in adoption procedure. In 1957 the Children's Bureau of the U. S. Department of Health, Education, and Welfare brought together 17 physicians to consider the role of the physician in adoption. The group included general practitioners, public health and hospital administrators, and specialists in obstetrics, pediatrics, psychiatry, and internal medicine.

The physicians concluded that the doctor is directly responsible for medical service to the natural mother, the child, and the prospective adoptive couple and for referring them to the appropriate social agency for help with social, emotional, and environmental difficulties. While the physician should not place a baby in an adoptive home, it is his responsibility to give adequate medical appraisal of the child before and after adoptive placement, the group concluded.[1]

A WIDE PROBLEM

Illegitimacy is a wide problem. All types of people are involved—girls from broken homes, married women with grown children, professional women with high community standing. A large per cent of the nation's crop of out-of-wedlock babies are produced by what society terms "nice" girls—persons who are almost entirely the victims of circumstances, environment, and emotional problems. Most public attention, however, has been focused on the others—the illegitimate babies produced by women whose sub-culture sanctions or at least permits illegitimacy—because many of these children are supported by tax funds under the Aid to Dependent Children program.

ADC was begun to help children whose fathers were killed in war, injured on the job, or for some other reason not supporting them and whose mothers could not provide adequate financial care. Since the development of Social Security and Unemployment Compensation programs, the majority of children for whom the ADC program was originally intended are cared for in another way. In many states, a good percentage of the children now being supported by ADC are illegitimate. As the cost of ADC rises with the growth of population, much of the blame is placed on illegitimacy. Many persons have claimed that the ADC program encourages illegitimacy by helping unmarried mothers support their children. "We are subsidizing an immoral way of life," they say.

Raymond M. Hilliard, Cook County (Ill.) welfare director, speaking on this subject, said, "This is a lot of nonsense. There was illegitimacy before ADC, and in all likelihood, if we stopped ADC tomorrow, there would still be illegitimacy."

According to the National Office of Vital Statistics the rate of increase in illegitimacy since 1948 has been almost exactly the same as in the period from 1918 to 1933 when there was no ADC program.[2]

BOYDEN'S COMMENTS

E. P. Boyden, director of the Imperial County (Calif.) Welfare Department, writing on this subject said, "To blame ADC for the increase in illegitimacy is about as logical as to blame business and industry for the slaughter on the highways because business and industry also receive huge sums of 'Do-Gooder Federal Aid'; or to blame the farmers for tuberculosis or polio or any disease spread by flies because the farmers also receive vast sums of federal money."[3]

In Mississippi approximately 20 per cent of the total number of children receiving Aid to Dependent Children are illegitimate. According to W. E. Holcomb, commissioner of public welfare, "If all illegitimate children could be removed from the Aid to Dependent Children program, which is not permissible under the Federal Social Security Act, there would not be enough money conserved to raise Old Age Assistance grants $1.00 per month per person."[4]

More and more illegitimacy is coming to be viewed as an economic and social problem rather than a moral issue. Once the burning question was, "How can we reform these women?" Today the pertinent question is, "Who is going to support their children?"

Last year Mississippi spent about $9 million on ADC. Approximately one out of five children supported by ADC in Mississippi is illegitimate.[5] During 1959 Cook County (Ill.) alone spent $50 million to support 105,000 persons on ADC. Nearly half of this went to care for illegitimate children.

COOK COUNTY COMMITTEE

Around the nation lawmakers are saying, "something must be done before it's too late." Cook County (Ill.) has organized a special committee to make a ten month survey of the county Aid to Dependent Children program. Commissioner Charles F. Chaplin who proposed the investigation warned, "Since 1955, ADC rolls in Cook County have increased 1,000 a month. At the current growth, in 1964 there will be 158,000

Louisiana Tightens ADC Policy

As JOURNAL MSMA went to press, the Louisiana state welfare board tightened policies on the Aid to Dependent Children program and agreed to help work out legislation that would cut the illegitimate children welfare burden. Major step taken by the board was to provide that pregnancy of an unmarried mother, or a woman isolated from her husband, would be evidence of a "non-legal union" and would disqualify her from all welfare aid for her children.

The board also adopted a new policy providing a more rigid and specific conception of "unsuitable environment" at home for children receiving welfare aid. ADC will cease where unsuitable home environments exist, if welfare personnel are unable to iron out the difficulties. The board agreed to work with Horace Wilkinson, III, Port Allen, elected senator in the primaries, who will introduce a bill into the legislature to ease the problem of illegitimacy. Previous legislation along these lines has encountered legal obstacles.

In Mississippi, ADC grants are restricted by House Bill 286, Laws of 1958, which provides that no mother will receive aid for her children if she has had an illegitimate child after receiving welfare until she can prove that she has ceased illicit relationships and is maintaining a suitable home for the children. According to Commissioner W. E. Holcomb, writing in the March 1960 *Welfare Brief,* only 10 per cent of those removed from the rolls have been returned by the county welfare boards.

on ADC rolls. Of these, 59,000 will be illegitimate children. The cost will be around $6 million a month."

Chaplin proposed that women who have borne one out-of-wedlock child be given birth control information at the county's expense. "If they choose not to take the advice and have more illegitimate children, then I think we have the right to discontinue aid," he said.

During the 1960 regular session of the Mississippi Legislature, Senator Hugh Bailey, Winona, introduced a bill calling for sterilization of unwed mothers. Under the terms of his act, a woman would be liable to sterilization after her second illegitimate child. If she does not want to submit to sterilization, she must put up a $3,000 bond payable to the state. In the event she gives birth to a third illegitimate child, the bond would be forfeited and the woman sterilized. The bond money would be applied to upkeep of the children as welfare subjects.

According to Senator Bailey, "We are neglecting the old people already. If the present rate continues, we will be shoving the old people aside to support a situation that is illegal in the first place. If something is not done to halt the tide of illegitimate children, it is going to take all the tax money to support them. The federal government won't do anything, so the states must."

Illegitimacy has been a problem since society recognized marriage, and it's likely to be around from now on. The panaceas suggested to date range all the way from sterilization of the unmarried mother to acceptance of the unwed mother and her child as a family unit in American society. The more idealistic say tightening up of the moral system is the only solution.

Since it is unlikely that illegitimacy will be wiped out in the next generation or so, the doctor should stand ready as a professional man to help the unmarried mother with her individual problems and as a citizen to help the community with the general problems posed by illegitimacy. ★★★

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The President Speaking

STANLEY A. HILL, M.D.
Corinth, Mississippi

A Forecast

As the member participates in the approaching annual session, he will instinctively look to the future. Clairvoyance will be stimulated by the essayist, the scientific and commercial exhibitor each of whom will be showing "what's new." In a separate way the delegate will muse over proceedings of the House of Delegates and project the organization decades ahead.

This short prophesy may land far afield, but seven predictions will be recorded, just for the sport of it. A lucky seven will correspond to our six scientific sections plus the organization.

Fifty years from now: Tuberculosis will be a historical disease having been eradicated by chemotherapeutic agents. Abruptio placenta will be controlled by hormones. Atherosclerosis will still exist but will be better controlled—the average span of life being one hundred years. Contact lenses will have replaced spectacles. Staphylococcal infections will be controlled by twenty-four hours of antibiotic therapy. Carcinoma will be controlled by medical therapy, isotopes and hormones, having dropped to the tenth place in the frequency of deaths.

In the year 2010 the Association, based on a state population of four million, will have 3,050 members and four AMA delegates. Supporting this is the bright outlook in expansion of both agriculture and industry. The new central office will be located near Ridgeland with a landing strip for officers' space ships. Contrasting 36 hours lost from his medical office to allow four hours in the Central Office, the President from Corinth will spend a portion of an hour each way in travel, thus being away from his own practice base less than six hours. Reflecting increased state wide interest, the attendance of delegates will be 98 per cent. History will repeat itself and the official organ will be named the *Mississippi Medical Monthly*. There will have been three presidents of the American Medical Association from Mississippi. ★★★

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MEDICAL ASSOCIATION

Volume I, Number 5

May 1960

EDITORIALS

Which Way Ahead

A. STREET, M.D.
Vicksburg, Mississippi

THE HISTORY OF the Mississippi State Medical Association dating back to the year 1856, indicates above all a devotion to its objectives of acquiring and disseminating medical knowledge and medical progress. The association has been active in developing and supporting various programs and methods aimed at making medical service of quality available to all in need of it. This function of efficiently planning the prevention and cure of disease is quite naturally a responsibility which should fall predominantly on those possessed of medical knowledge and with experience in its application, in other words, the medical profession.

However, when it came to implementation, members of the Association in its early days realized that plans were not enough. The Association was faced with lack of both authority and financial means to carry through on any but a very limited scale. In order to meet this situation various resolutions were passed and presented to the state legislature pointing out the need for laws relating to health.

At the request of the Medical Association, the legislature passed a medical practice act in 1882. This was later replaced by a much improved version. At the request of the Medical Association the legislature authorized the establishment of the State Board of Health in 1877. However, the first appropriation of any consequence was $25,000 in 1912. The appropriation for the most recent biennium was $3,167,000. The Medical Association requested the legislature to provide a bacteriology laboratory in 1894, and also requested a medical library and museum, and a Department of Vital Statistics. In 1942, the Association which had previously advocated the establishment of a school of medicine went on record in favor of a four year medical school and teaching hospital to be established by the state in Jackson as part of the University of Mississippi.

These special situations were met by joint action of the medical profession and the state. The service provided was dictated by need of all the above mentioned, and as a result Mississippi is a healthful area for families to live and grow up.

Providing adequate medical care for all who need it is, admittedly, a rather complex field. There are acute and chronic diseases, minor, major, catastrophic, and we even encounter what appears to be convenient illness of which com-

From the Surgical Section of the Street Clinic and Mercy Hospital.

pensation seems to be the dominant etiologic factor. In the economic scale, there are some to whom the cost of medical expense is of no great importance. Others can meet any ordinary expense, and then there is the group which can pay little or nothing.

The first mentioned group presents no problem. The second or moderate income group is, to an increasing extent, meeting its need by the use of voluntary sickness and hospitalization insurance. The usual policy should meet ordinary needs, and if they could be led to realize the importance and to add catastrophic illness coverage, it would go a long way toward meeting the needs of the moderate income group. The third, or more or less indigent group, must receive care at public expense, preferrably at the local or community level. Formerly, in the days when the bread line was common, the indigent group was quite large. Just as an example of how much this group has diminished, you will recall that formerly charity patients in large hospitals provided an abundant supply of clinical material for teaching purposes. Now with so many patients covered by insurance there remains only a scant charity load for teaching. According to the insurance information office of Pennsylvania, there are 123,038,000 Americans, already protected for medical and hospital care, including 40 per cent of all persons over the age of 65.

If we could only stay on the track and confine our public assistance to those in need and unable to help themselves, providing care for the diminishing indigent group should not be too difficult. In considering eligibility, we should establish no underprivileged groups and with the exception of service connected veterans, no overprivileged groups.

Eligibility should be completely unrelated to age, social security status, and military service other than service connected. It certainly seems that election years should have no proper bearing on legislation of such vital concern to all Americans.

It may well be that the money now being spent on welfare projects, if properly distributed, is already sufficient for the care of all the legitimately needy population. Whether this is true or not, the medical profession stands now, as in the past, ready to cooperate to the fullest extent in formulating and operating plans to provide adequate medical care for those who legitimately qualify according to need. ★★★

The Street Clinic

Indigestion From The Smorgasbord of Socialism

I

Something's rotten but not in Denmark. Rather, it's to the northeast in Sweden, and it is really rotten, according to Peter Wyden, associate editor of *The Saturday Evening Post*. What smells more than the famed Swedish export of dried fish and other assorted smorgasbord victuals is the Swedish welfare state. On the surface, nobody in Sweden should have anything to worry about—the state takes care of everything but, unhappily, it doesn't seem it works out so nicely.

For example, in the past 14 years welfare benefits in Sweden have increased 600 per cent. Nearly everything is free but the word "free" must be understood to be synonomous with taxes which, for some reason, everybody pays. This patently socialist society has not only the usual free schools but free university tuition, free meals for students, free medical and hospital care, free holiday homes for tired housewives, interest-free loans for newlyweds (or even unwed mothers) with which to buy furniture, annual subsidies to mothers for each child born, and all sorts of pension plans which will, in fact, exceed annual employment earnings in just a few years.

II

So, what's rotten in this utopia where nobody worries about anything? Just about anything and on the contrary, everybody apparently worries about everything. Although life is virtually guaranteed, the Swedish suicide rate is about 20 per 100,000 per year, more than twice that of the United States. There are more income tax fraud indictments in Sweden than in our nation and the Swedes have the highly dubious honor of consuming the most alcohol per capita of any nation in the world, free or otherwise. Since 1950, car thefts in this northern state of perfection have multiplied four times and the Swedish psychiatrists say that incidence of neuroses is increasing like nobody's business.

Arrests for drunkenness, burglaries, and juvenile delinquency in Stockholm have tripled in the last ten years. The local social workers, enthusiastic promoters of the welfare state, are beginning to express reservations on the benefits of government.

Mr. Wyden quotes Dr. Sten Mårtens, a staff psychiatrist at Breskomberga Hospital in Stockholm, as stating that ". . . a struggle free life is

a less happy life. It's not having to put your mind to serious things—to saving for a house, saving for the children. A lot of people are just floating in the middle of nowhere." Dr. Mårtens believes that many Swedish suicides are committed over marital and other problems because the people are so unaccustomed to emergencies that they cannot cope with the simplest acute and final decisions which confront them.

III

Sweden's total geographical area about equals that of California, but it has only about half the population of the Golden Bear state. The national economy is ruled by Swedish versions of AFL-CIO and NAM, the Swedish Trade Union Federation and the Confederation of Swedish Employers. These economic giants work in astonishingly close harmony despite labor's having the upper hand and they negotiate their fantastic welfare programs at a single bargaining table.

Unlike American unions, Swedish labor groups apparently understand that somebody has to make a profit if the worker is to take home any real pay and get his welfare handout, too. Since the little nation depends largely on exporting products of the extractive and machine industries, the unions recognize that their demands must stop short of forcing employers to price themselves out of the world market. The employers, in turn, have some incentive to go along because they have only an 80 per cent top limit income tax against the USA's 91 per cent. Additionally, most Swedish industry is nationalized and the remaining privately owned firms are hewing the welfare line lest they, too, be slurped up in socialism.

IV

The balance might appear ideal—at least from the workers' viewpoint but that really isn't the case. There is the all-pervading uncertainty of certainty, the guarantees of the omnipotent welfare state. Even the prime minister himself feels that youth and crime problems are unhappy side effects of welfare prosperity. He is currently engaged in a program of subsidizing such groups as youth symphonies and sports as hopeful remedies. One social worker puts it this way: "The energy you use for the fight for life is left free here. As yet, we haven't found the way to channel this energy into productive ways.

The Swedish people are falling into neat little slots where none seems to aspire to rise above his economic class. Despite every worker's being on an incentive pay plan, nobody appears to have a real incentive to do anything about it. The diligent work feverishly to earn to spend because the need to save money doesn't exist. The slothful find they do not need to work because they are the darlings of eager welfare workers.

Everyone in Sweden seems to have doubts and concerns over the welfare state even though it's being expanded steadily. For one thing, they are finding out that high taxes and inflation are the basic price elements of welfare. The recent 4 per cent national sales tax is hitting the workers hardest and that's the group which resents paying for handout benefits.

V

During the hearings on the Forand bill conducted by the House Committee on Ways and Means at Washington last July, Walter P. Reuther, United Auto Workers president and a principal architect of the bill, took the brass ring in a walk for being the hottest advocate of welfare medicine at tax expense. After reciting his case through dozens of pages of testimony, an interesting colloquy between this labor boss and Representative Noah Mason (R., Ill.), a senior minority member of the committee and true conservative, took place. This is it, *verbatim* from the record:

Mr. Mason: "Mr. Reuther, I noticed that you complimented quite highly the way Sweden takes care of its old people. I am inclined to agree that they do take care of them from what I have heard about it. What is the form of government in Sweden at present?"

Mr. Reuther: "Well, I think that Sweden is one of the most democratic countries in the world and I think that anyone who goes to Sweden and checks their whole system of social insurance and housing comes back deeply impressed. I happen to know personally the prime minister of Sweden and I think he is a very wonderful person who believes in the same basic democracy and human values that we believe in. So I say to you that they are a democratic country the same as we are."

Mr. Mason: "Now, democracy has a great many forms. Is it true that Sweden has a socialist form of government?"

Mr. Reuther: "Well, that, of course, is just a lot of nonsense. If you will look at Sweden, and I suggest that maybe a little research work would throw some light on this, you will find that while it is true that the group that makes up the labor movement and the political party that they are associated with in Sweden has been in control of the government for many years, nevertheless socialism and the nationalization of basic industries have not taken place. The Swedish economy is

essentially a free enterprise economy over 90 per cent privately owned. . . ."

Mr. Mason: "Of course, I know some of those facts but Sweden today has what is called a socialist government but it is really a labor welware government."

VI

How correct Noah Mason is and how wrong can Walter Reuther manage to get! Mr. Reuther's "90 per cent private enterprise" is a mathematical aberration bordering on the impossible. Here are the facts: The state runs nearly all railroads, the airlines, most electric utilities, all the telephone and telegraph facilities, large forest and wood products industries, the liquor and tobacco monopolies, controls the construction industry, and shares in the richest extractive industries which are the nation's life blood. Nonprofit consumer cooperatives are squeezing the retail business until it hurts.

And, remember, doctor, medical care is a keystone in the Swedish socialist system just as it was in Bismarck's system almost a century ago in the classic German system of socialism. Never forget this: No nation has ever been totally socialized until medicine was first socialized. Let those in the fields of transportation, banking and finance, insurance, utilities, basic and consumer manufacturing, and distribution heed this 20th century economic postulate and heed it carefully.

Medicine's plight is everybody's business because professional services are inescapably a political and economic bellwether. A few decades ago it was apparently true that ". . . as Maine goes, so goes the Union" but today, as medicine goes, so goes the political economy.—R. B. K.

Let's Simplify Insurance Paperwork

Recently, a lecturer addressing the senior class at the University of Mississippi School of Medicine pointed out that ". . . between forty and sixty cents of the first dollar you will earn in private practice will be paid not by the patient but by a legally responsible third party, probably an insurance or prepayment organization." This statement confirms the vexation confronting every private clinician who now finds it necessary to devote himself to completing a myriad of different claim forms ranging from simplified, businesslike blanks to complex, multipage administrative monstrosities seeking histories of malignant neoplasms in second cousins when the patient has only a simple fracture.

Happily, the American insurance industry has not been indifferent to this perplexing situation and something is being done about it. As a matter of fact, the paperwork puzzle of insurance claims has been a major concern to medicine *and* insurance organizations. The problem has increased rather than decreased because more insurance covering medical, surgical, hospital, and accident care is now in force than ever before. Moreover, new companies are entering the field every day, and each inevitably develops its own claims adjudication system, resulting in a hodgepodge of confusion for those who must fill in the blanks.

The Health Insurance Council, a composite grouping in insurance trade organizations having an interest in this field, has been working six years to develop a simple, one page claim form acceptable to the medical profession and every insurance company. This has been an ambitious undertaking and many obstacles have been encountered. AMA's Council on Medical Service has contributed effectively to research and coordination of form development and the project now has official blessings from the AMA House of Delegates. About 85 per cent of the 800 odd American insurance companies writing health care coverage honor the form.

The basic concept of the HIC uniform claim form is *a set of standard questions in a standard sequence* designed to be appropriate for all types of accident and health insurance claims. The primary objective is to reduce paper work to a minimum and still provide the insurance company with the information it must have to pay the claims. There

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"It will seat three 'befores' or six 'afters.'"

are two basic statements for attending physicians to complete—one for group insurance and another for individual coverage. The latter is somewhat more detailed because additional information is needed to process non-group claims.

The basic aproach to form design has been to include only those questions necessary to establish proof of claim validity. Ordinarily, this is accomplished by including between nine and 14 questions on the one page. The companies must have information to identify the patient, to define the loss—meaning the extent of sickness or injury, and to know what services have been rendered.

At a recent meeting, MSMA's Council on Medical Service expressed the belief that the time is ripe to present the uniform claim concept to the House of Delegates for decision and this will be done at the 92nd Annual Session this month. The delegates will have an opportunity to accept or reject the idea. If it is accepted, the association will arrange for supply of these forms to physicians at minimal cost, probably through a contract printer. The decision will be important to physicians, most of whom are saying let's simplify health insurance paper work.—R. B. K.

Compensation Confusion

Workmen's compensation legislation needs much more objective consideration than it has been afforded during recent weeks by the legislature, officials of state government, insurance companies, and employer and labor groups. Despite this need, workmen's compensation has been a major legislative issue, playing third fiddle only to the liquor and church property proposals. Debate on it hasn't subsided in the least.

Perhaps the biggest problem confronting everybody having a legitimate concern over this legislation is one of goals and objectives. For all the sound and fury over the package of eight bills sponsored by employer and insurance organizations, there is still a lack of agreement—if not, in fact, understanding—on exactly what workmen's compensation ought to do. Some would have a comprehensive health care program in its name while others might wish benefits delivered only when the factory roof falls upon an employee. Most interested parties are somewhere in between.

MSMA'S STAND

But the Mississippi State Medical Association isn't navigating blind on this issue. A year ago, the House of Delegates adopted an unmistakably clear policy position which was developed by the Committee on Industrial Health through the Council on Medical Service. In a nutshell, this is it:

"Medical organization believes that the basic goals of workmen's compensation today are:

"1. Prompt rehabilitation of the occupationally disabled,

"2. Assured, prompt, and adequate indemnity for the occupationally disabled or survivors in cases where death occurs, and

"3. Accomplishment of these objectives at minimal cost to employers and society."

The association recognizes both legal problems and those relating to insurance costs standing in the way of these objectives. For the most part, they are undefined problems. At worst, they have a dollar mark in front of them and at best, they are gray areas of misunderstanding. Mississippi physicians, for example, are deeply interested in gainful employment of the handicapped but they know the economic facts of life. They realize that employers are reluctant to hire the handicapped when compensation indemnification for job aggravation of pre-existing conditions gets top billing. Thus, doctors feel that an equitable employable employment climate includes (1) limiting employers' liability at a level consistent with additional compensation risks, (2) defining by law—something still not done sufficiently—such terms as pre-existing conditions, accident, injury, and occupational disease, and (3) requiring medical determination of such conditions prior to employment.

ACTION NEEDED

Obviously, these are ideals but they will never be approached unless the first step is taken. The association further recognizes that achievement of this equitable climate is a progressive legislative process but, again, this doesn't mean piecemeal enactments which conceivably create as many vexing problems as they purport to solve.

What seems important is to place workmen's compensation in proper perspective with reasonable economic orientation in the total industrial picture. Through democratic legislative processes, the law must state exactly what the program is intended to accomplish. Conditions of injury and disease relating to occupational endeavor must have statutory definition. The program must be fair and just and all parties in the compensation picture have no choice but to accept their proper responsibilities.

That's the size of it, Mississippi, and your physicians stand ready to help.—R. B. K.

Book Reviews

Current Therapy. Edited by Howard F. Conn, M.D., with 12 consulting editors. Cloth, 808 pages. Philadelphia: W. B. Saunders Co., 1960. $12.00.

The practitioner's old friend of years standing offers new values in its twelfth appearance. As with previous editions, the 1960 version assumes that the physician has arrived at a correct diagnosis and the work addresses itself to therapeutic measures by disease groupings and anatomical systems. A distinguished list of 308 contributors bring established methods, research, and recent reporting into concise perspective, focusing attention on the newer—and usually potent—chemotherapeutic agents. Often, these require careful administration of exact dosage as well as frequent or continuous observation of the patient. Appropriate attention is afforded known side effects of medications discussed and the expected reaction in classic cases.

Current Therapy is distinguished from other compilations by presenting completely new editions annually rather than merely revising old ones. Rotation of topic assignments among the capable contributing authors assures freshness of viewpoint and critical evaluation of previously discussed therapeutic measures. The book, however, is not a compendium on experimental medicine but rather an authoritative, factual presentation of methods employed by established therapeutics.

Useful appendices listing poisons and antidotes, active ingredients in commercial products, commonly used drugs by proprietary names, and a variety of reference tables add to the value of the book. The general practitioner will find it highly useful in direct clinical application while the specialist can employ it profitably in interpreting referral problems in fields foreign to his discipline.

Anatomy. By Ernest Gardner, M.D., Wayne State University; Donald J. Gray, Ph.D., Stanford University; and Ronan O'Rahilly, M.D., Wayne State University. Cloth, 999 pages with 568 line drawings and 64 plates of radiograms. Philadelphia: W. B. Saunders Co., 1960. $15.00.

This attractive, highly readable regional study of human anatomy is intended to provide a text of sufficient brevity for the undergraduate medical and dental student during present shortened courses, to present information on living anatomy and to emphasize the importance of the relationship between structure and function, and by the citation of relevant references, to meet the needs of the more advanced student and the postgraduate worker.

Organized in eight principal parts, the work is carefully designed to conform logically with natural regions of the body. The parts or divisions include general anatomy, the upper limb, the lower limb, thorax, abdomen, pelvis, back, and head and neck. Clear, utilitarian illustrations will assist greatly in the undergraduate's grasping the subject material while providing the more advanced student an extremely usable reference. The authors purposely omitted detailed discussion of neuroanatomy, histology, embryology, and comparative anatomy since these specialized areas of study are more often than not considered separately in present curricula.

A separate glossary of eponymous terms is included as a final touch to precise documentation. The quality of the paper is excellent, offering almost complete opacity with respect to the printing as well as non-glare characteristics.

While the objective of the authors of contributing to medical education has been eminently achieved, the practicing clinician will discover in this book new and useful reference data, particularly applicable in preparation of scientific essays.

Domestic Journals

Problems of School Attendance. Kurt Glaser: Pediatrics 23:371 (February) 1959.

Problems in school attendance occur commonly in general pediatric practice. Glaser's paper reviewing the literature and reporting a series of his own states that these should be distinguished from truancy, which is nonattendance at school and absence from home without the parents' knowledge during school hours.

He feels that this problem should be entitled "problems of school attendance" rather than "school phobias" since this broadens the field. He lists three types of such problems. First is the true school phobia as described by Johnson, Eisenberg, and others, which is an inappropriate

fear of attending school, representing displacement from the true cause and focus on fear of school, thus obscuring the real reason for fear and anxiety. These children are usually afraid that something dreadful and catastropic will happen either to their parents, their home or their siblings if they should leave, and have true panic reactions if they are forced to go to school. This fear may follow such events as the death of a sibling or the house burning down, but is usually more closely related to suppressed hostility to the parents, siblings, or other members of the family.

The second group is comprised of children who convert their fear into somatic reactions such as headache, vomiting, or stomach ache when they are sent to school. Etiology of their fear may be fear of failure in school, fear of being teased, fear of being made ridiculous in front of their schoolmates or the mechanism may be much as that listed under Group I.

The third group are those children who will not go to school and when asked state simply, "I just can't do it." This is usually related to a fear of failure in some sphere of school activities or their social, athletic or intellectual ability. Often this may be engendered by perfectionistic and overdemanding parents, by an inability to keep up with the class average, either because of intellectual or physical handicaps, by realistic or unrealistic fear of the teacher, or realistic or unrealistic antipathy for one or more of the classmates.

Glaser states that the treatment for these problems is as follows. First, immediate return to school, if at all possible, and if necessary, by physical force. Second, ascertain the true underlying cause of the child's fears. Third, if necessary, emergency treatment to restore the child's balance to enable him to return to school. Fourth, it is almost always necessary to treat parents and child at some length to enable them to understand and rectify the true causes of this child's fear.

New Concepts of Psychiatric Care With Special Reference to the Day Hospital. Charles E. Goshen: J. Am. Psychiatric Asso. 115:808 (March) 1959.

A brief review of the dilemma resulting from the expanding need for psychiatric care is presented, and the "day hospital" is suggested as a valuable aid in resolving the dilemma. Various factors which tend to make the standard public mental hospital obsolete are listed. Because these hospitals have the popular reputation of being places reserved for patients who have reached the ends of their ropes, psychiatrically, and therefore filled with chronic, deteriorated psychotics, the public does not seek hospital care until a desperate situation has been reached.

Education of the public leads them to be less content with the kind of custodial care offered by the state hospital. The term "hospital" is seen by some as a euphemism when applied to these state institutions. The rising costs of this inadequate approach leads to seeking less expensive and more productive ways of doing the job expected of the institutions. One of the new types of psychiatric centers coming into use is the day hospital.

The Proceedings of the First National Day Hospital Conference are summarized. Although in existence only ten years, the day hospital has come to be thought more valuable than any of 40 methods of psychiatric therapy, according to a recent survey of psychiatrists. These centers have developed to fill the need for an "in between" facility providing supervised life experience without requiring complete separation from the patient's home life.

All existing day hospitals place heavy emphasis on activities programs for patients but differ somewhat in their approach to the individual type of treatment offered by the psychiatrist in charge to each patient, some centers using organic therapies extensively and others using psychotherapy exclusively. It is hoped that ultimately a commonly accepted theory may evolve out of common agreement in therapeutic practice. Various groups of personnel include psychiatric nurses, social workers, psychologists, hospital volunteers, occupational and recreational workers, family physicians, medical students, interns, various types of teachers, and completely untrained workers.

Patients selected include all age groups, at times following standard hospitalization and at other times substituting for it, even caring for moderately disturbed patients as personnel gain experience. There is an emphasis on a full program, 9 to 4 each day, Monday through Friday, and one unit has an evening program for patients who are employed during the day. Physical facilities in use vary widely since they developed from expediency rather than design.

The question of legal responsibility has been raised but has posed no serious problem and the risks incurred have been less than the surgical risks of uncomplicated appendectomies. The per diem cost of operation is higher than standard state hospitals but comparable with the per diem costs of operating psychiatric units of general hospitals. Since the average patient stay is measured in weeks rather than years (as in state hospitals), the total cost of treating a patient is much smaller in a day hospital than in an inpatient setup.

NEW FILMS

Glaucoma—What the General Practitioner Should Know. 16 mm., color, sound, showing time 22 minutes. Produced by the National Society for the Prevention of Blindness, 1790 Broadway, New York 19, N. Y., from which it may be ordered on loan without charge except for transportation. For professional audiences with the understanding that an ophthalmologist will be present.

One out of eight blind persons in the United States lose their sight because of glaucoma. Too often, the ophthalmologist sees the glaucoma patient after substantial sight loss which may be too late for successful care of the condition. After brief statistical presentations on the disease, a description of two cases is presented. The first is a male patient with acute glaucoma and the second, a woman with a chronic involvement.

Maintenance of intraocular pressure, measurement of ocular tension, and differences between congestive glaucoma—either acute or chronic—and simple, non-congestive conditions are considered. Treatment is discussed with reference to miotics including pilocarpine and eserine. After showing remedial surgical technics among which are basal iridectomy, cyclodialysis, sclerectomy, iridencleisis, and cyclodiathermy, the film ends with the ophthalmologist talking to the family physician by telephone, thanking the latter for the referral and urging continued vigilance for early discovery of the disease.

The Faces of Depression. 16 mm., black and white, sound, 1,024 feet, showing time 28½ minutes. Produced by Robert Anderson Associates, Limited, Ottawa 3, Ontario, Canada, for Geigy Pharmaceuticals. No charge for loan services to medical and associated scientific groups. Order from Division of Geigy Chemical Corporation, P.O. Box 430, Yonkers, N. Y. For medical and associated educational purposes only.

Depression has been called "a disease of general practice," since it is behind so many of the complaints for which no physical causes can be found. Until the introduction of electro-convulsive therapy—electroshock—in the middle thirties, there was no treatment whatsoever for depression. Patients were simply looked after and prevented from harming themselves in mental hospitals, and the depression would usually clear up in from six to nine months. Shock proved a reliable treatment but often with unpleasant side-effects. Now, drugs are being used alone or in combination with shock for the treatment of depression.

"The Faces of Depression" is designed to help in the recognition of the disease and to aid in its understanding. Patients are seen and heard in unrehearsed interviews. The film makes no attempt to classify different kinds of depression, but concentrates rather on recognition of the syndrome. Symptoms, differential diagnosis, and treatment are discussed.

Helping Hands for Julie. 16 mm., black and white, sound, 973 feet, showing time 27 minutes. Produced by the American Medical Association and American Hospital Association in cooperation with E. R. Squibb and Sons, 1958. No charge for loan service. Order Film No. 168 from AMA Film Library, 535 N. Dearborn St., Chicago 10, Ill. For high school audiences.

"Helping Hands . . ." is a film on career opportunities in medicine and related health fields. The story of Julie centers around her fight for life when she is brought to the hospital emergency room—diagnosis: unknown.

The helping hands aiding the physician in this vital search for the correct diagnosis are those of nurses, medical technologists, x-ray technicians, and the medical records librarian. The documentary is designed to show the rewarding satisfaction of serving in health fields.

Someone Is Watching (Careless Handling of Narcotics). 16 mm., black and white, sound, 560 feet, showing time 15 minutes. Produced by the New York State Department of Health, 1958. Service charge for rental and transportation $2.00. Order Film No. 60 from AMA Film Library, 535 N. Dearborn St., Chicago 10, Ill. For professional and paramedical audiences.

This excellent informational documentary shows how legal narcotics fall into the hands of the unscrupulous and addicts. Carelessness and false confidence are emphasized and the need for safeguarding narcotic drugs is demonstrated. "Someone Is Watching" is recommended for orientation and training programs for local medical societies, nursing classes, and medical students.

Cancer Cure-all Still in Test Tubes

A cure-all for cancer exists only in newspaper headlines and researchers' dreams, according to the president of the American Cancer Society.

Speaking to a state ACS crusade rally on March 31, Dr. Warren H. Cole praised the progress in cancer research but warned that the day of the "magic pill" was still far off.

Shown at the State meeting of the American Cancer Society, Mississippi Division, are from the left, Dr. George E. Twente, of Jackson, Professional Delegate to the American Cancer Society, National; Dr. Stanley Hill, of Corinth, President of the Mississippi State Medical Association, and member of the Executive Committee of the ACS, Mississippi Division; Dr. Warren Cole, Chicago, National President of the American Cancer Society, and Dr. David Pankratz, ACS Mississippi President and Dean of the University of Mississippi Medical School.

"We are very optimistic about the development of some agent that will eliminate certain types of cancers, but a magic cure is unlikely in the next few years," said Dr. Cole, who is also head of the department of surgery, University of Illinois College of Medicine.

Dr. Cole told the audience of 425 volunteer cancer workers that the breakthrough was likely to come in the prevention of leukemia. Present drugs are more effective in leukemias and lymphomas than solid tumors such as carcinoma of the colon, he said. Dr. Cole pointed out that vaccines have been developed which will prevent leukemia in mice.

Reviewing virus-cancer research, Dr. Cole concluded "we are driven to the theory that cancer in humans is caused by a virus and not just by accident." He predicted that vaccines or antibodies will be developed that can prevent several types of cancer. Research has shown cancer to be more specific and antigenic than once was thought, he said.

Dr. Cole warned that the only present curative methods are surgery and radiation and that early diagnosis is still the most effective weapon. While a number of drugs have been shown effective in the palliative treatment of various types of cancer, they tend to lose their effect and are all toxic, he said. However, researchers have pinpointed the cause of decreasing effect and at least one nontoxic cancer drug has been produced, Dr. Cole said.

In order to conquer the nation's second killer, an enormous amount of basic research and a good bit of wildcatting is needed, said Dr. Cole. He pointed out that the United States is well ahead of other nations in cancer research.

Earlier in a press conference, Dr. Cole commented on the recent decrease in the incidence of stomach cancer and increase in lung cancer. He gave no theory on stomach cancer decrease, but attributed the rise in lung cancer to smoking. "I am a firm believer that cigarette smoking is an important factor in the etiology of lung cancer," he said. Air pollution might have some effect on the rise, he said, but not nearly as much as smoking.

Dr. Cole, who has a distinguished record in cancer research, was the principal speaker at the rally held to kickoff the state-wide cancer crusade. He was introduced by Dr. David S. Pankratz, president, Mississippi division, and Dr. George E. Twente, professional delegate, American Cancer Society.

Mrs. Leland Speed, president, Hinds County unit, reported Mississippians contributed more than $216,000 to the society last year. The nationwide total was $30 million.

Presiding at the rally were John E. Gregg, state crusade chairman, and Max McLaurin, Hinds County crusade chairman. Lt. Governor Paul B. Johnson gave the welcome.

Alumni Groups Plan Meetings

Three medical alumni groups will meet during the 92nd annual session of the Mississippi State Medical Association.

University of Mississippi medical alumni will meet on Tuesday, May 10, in the Hotel Heidelberg Rose Room at 5:00 p.m. for a business session. A fellowship hour will be held at 7:00 on

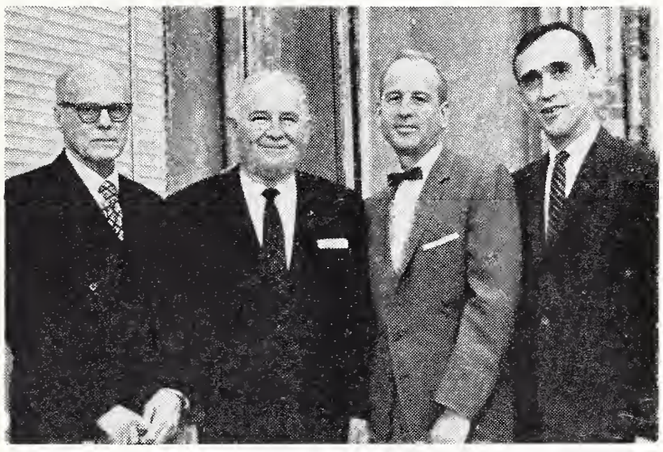
the Roof and a dinner at 8:00, also on the Roof.

University of Tennessee medical alumni are planning a social hour banquet Monday, May 9, in the Rose Room, Hotel Heidelberg, beginning at 6:30 p.m. Tulane University medical alumni are invited to attend a fellowship hour and banquet in the Crown Ballroom, King Edward Hotel, Monday, May 9, beginning at 7:00 p.m.

AHA Director Addresses State Meeting

Russia has out-Sputniked, out-shot us to the moon, and about out-missiled us because we have lost our sense of destiny, according to the executive director of the American Heart Association.

Speaking at the association's ninth annual meeting dinner on April 7, Rome A. Betts, New York, warned, "Ours is fast becoming a materialistic culture. We must recapture our sense of destiny through the pursuit of truth for the betterment of mankind." The Heart Association is dedicated to this ideal through its research program, he said.



Shown are four 1960 officers of the Mississippi Heart Association. From left to right they are S. C. Hart, Jackson, treasurer; A. G. Paxton, Greenville, president-elect; Dr. Lucian M. Ferris, Vicksburg, vice president; and Dr. J. Manning Hudson, Jackson, president. Not present when the picture was made is Mrs. Gertrude Nelson, Vicksburg, secretary.

Betts told the audience of 125 physician and lay members of the Heart Association that the AHA guaranteed no less than 50 per cent of its income would be spent for research. In 1959, the percentage was 59.3 per cent, he said.

Speaking on "Freedom of Action," Betts said that the Heart Association was primarily interested in finding the most creative research minds. The choice of project is left up to the researcher, he explained.

"We think this policy pays off," Betts said. "Thanks to research some forms of heart disease can be prevented, a few cured, and almost all helped by proper treatment after early diagnosis," he pointed out.

Commenting on the heart fund drive, Betts said that every citizen had the freedom to give or not to give. He explained that the Heart Association did not participate in the United Fund program because it felt freedom of choice was denied the contributors.

After Betts' speech, Dr. D. J. VanLandingham, Jackson, presented the annual awards of the Mississippi Heart Association. Distinguished service awards were given to J. O. Emmerich, McComb, outgoing president, and Dr. Clifford Tillman, Natchez, who has worked with the Adams County and the state Heart Associations for eight years.

Service recognition awards were given to Charles D. Fair, Louisville, chairman of the 1960 heart fund; Lawrence J. Franck, Vicksburg, district 2 chairman; W. M. Flowers, Brookhaven, district 8 chairman; Edward S. Khayat, Moss Point, district 9 chairman; Porter L. Fortune, Jr., Hattiesburg, district 10 chairman; Dr. Lindsey O. Todd, Meridian, district 12 chairman, and Tom J. Tubb, West Point, district 13 chairman.

Certificates of appreciation were awarded to the Mississippi Farm Bureau Women's Committee, the Mississippi Hairdressers Association, and the Jackson Y-Teens.

Charles R. Sayre, Greenwood, gave the report of the nominations committee which was unanimously accepted. Officers of the Mississippi Heart Association for 1960 are Dr. J. Manning Hudson, Jackson, president; A. G. Paxton, Greenville, president-elect; Dr. Lucian M. Ferris, Vicksburg, vice president; Mrs. Gertrude Nelson, Vicksburg, secretary, and S. C. Hart, Jackson, treasurer.

New directors appointed to serve three years are Donald Bartlett, Como; W. A. Crabill, Marks; J. O. Emmerich, McComb; Porter L. Fortune, Jr., Hattiesburg; Dr. Clifford Tillman, Natchez; Dr. Nelson Tyrone, Prentiss; Dr. D. J. VanLandingham, Jackson, and Robert J. Whitfield, Greenville.

Dr. L. M. Ferris, Vicksburg, and Jack N. Tucker, Tunica, were named delegates to the AHA Assembly for 1960-61. Other delegates for 1960 are Dr. J. Manning Hudson, Jackson, and A. G. Paxton, Greenville.

Cardiovascular Seminar Held at University

The seventh annual Cardiovascular Seminar was held at the University of Mississippi School of Medicine, Jackson, April 6 through 8.

Sponsored by the Mississippi Heart Association and the University, the three-day short course on heart disease diagnosis and treatment featured five guest lecturers. They were Dr. John D. Keith, pediatric cardiologist, Hospital for Sick Children, Toronto, Canada; Dr. William Bean, professor of medicine, University of Iowa; Dr. John Kirklin, Mayo Clinic surgeon; Dr. Robert Rushmer, University of Washington physiologist, and Dr. Cowles Andrus, head of the heart disease division, Johns Hopkins University.

Among the subjects covered by the lecturers were inborn heart defects in children, the heart in pregnancy, rheumatic heart disease, and selection of suitable cases for heart surgery.

Physicians from Mississippi, Louisiana, and Arkansas attended the seminar which regularly draws more than a hundred doctors from the three-state area.

American Heart Association To Meet October 21-25

The American Heart Association's 1960 Annual Meeting and Scientific Sessions will be held in St. Louis, October 21-25. The 33rd Scientific Sessions are scheduled from Friday, October 21 through Sunday, October 23 in Kiel Auditorium.

June 1 has been set as the deadline for submission of abstracts of papers to be presented at the Scientific Sessions and for space applications for scientific exhibits. Papers intended for presentation must be based on original investigations in, or related to, the cardiovascular field.

Official forms for submitting abstracts and applications for scientific exhibit may be obtained from Dr. F. J. Lewy, assistant medical director of the American Heart Association. Space for industrial exhibits may be requested through Steven K. Herlitz, Inc., 280 Madison Avenue, New York 16, New York.

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"It doesn't have to be a fancy nose—just something to hang my glasses on."

Central Society Hears Caden, Cole

Dr. John G. Caden and Dr. Wilfred Q. Cole discussed the problem of cerebral palsy in Mississippi at the March meeting of the Central Medical Society.

Dr. Caden is medical director of the Mississippi Hospital-School for Cerebral Palsy, and Dr. Cole is a member of the hospital's department of pediatrics.

According to Dr. Caden, there are 1,543 cerebral palsy patients on the active registry of the Mississippi Crippled Children's program. Last year 70 patients were treated at the Hospital-School.

"As stewards of the state's tax money, we have tried to select children carefully and bring in those who are educable or treatable from a physical standpoint," he said.

Dr. Caden reported that of the patients treated at the Hospital-School last year, only 41 per cent had IQ's below 70 and 15 per cent had IQ's above 110.

"This is well above the average intelligence of the cerebral palsy population and shows the selection of those children most amenable from an educational standpoint and also from a physical or surgical standpoint," he said.

(JOURNAL MSMA invites all component medical societies to report organization news. Articles should be double-spaced and addressed to Medical Society News, JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION, 735 Riverside Drive, Jackson, Mississippi.)

Announce Medical Licensure Examinations

The Mississippi State Board of Health will hold medical licensure examinations on June 20 and 21 at the Robert E. Lee Hotel, Jackson.

Examinations on the first two years will be conducted June 20 at 8 a.m. Certificates or Dean's statements are required for verification. Exam-

inations on the last two years are scheduled for June 21 at 8 a.m. Medical diplomas are necessary for verification.

Applications may be secured from Dr. A. L. Gray, Secretary, Mississippi State Board of Health, Jackson.

Solon Seeks SMEB Scholarship Expansion

A new bill enlarging and extending the scope of the State Medical Education Board program was introduced under sponsorship of Carroll County representative Clarence Pierce during closing hours for new introductions in the 1960 regular session of the state legislature. Designated HB 700, the measure proposes continuation of the board with unchanged membership classifications, an executive staff, and new authority to grant either loans or scholarships to medical students.

Key changes sought included a new loan provision under which students may borrow up to $5,000 for assistance in regular four year medical school curricula. In the case of white students, training would be at the University of Mississippi School of Medicine but non-whites would attend "any four year medical college in the United States approved by the board." Loans repaid in cash would bear 4 per cent interest but would be due within three years after completion of training.

An additional interest rate of 1 per cent per year would be added, the bill sponsor says, after the fourth year but the upward graduation would never exceed 8 per cent.

Under the new proposal, scholarship awardees will be permitted to satisfy financial obligations by practicing in "any city or municipality, town or community in the state of Mississippi to be designated by the board." Present requirements relate to rural areas with a stated maximum percentage of scholarship graduates who may practice in larger cities or work in public health.

Mr. Pierce's bill seeks $30,000 biennially for administration and an initial amount of $20,000 for revolving fund loan scholarships. The House Committee on Ways and Means has approved just over $90,000 for the program under the old law which would provide for continuing those students already in medical school, new Negro applicants, awardees who intend to devote themselves to full time public health service, and administration.

Formerly, the program was provided appropriations up to $500,000 per biennium with additional funds for administration. In 1958, the present downward trend in activity was begun when the legislature authorized only about $250,000 with restrictions on new scholarships.

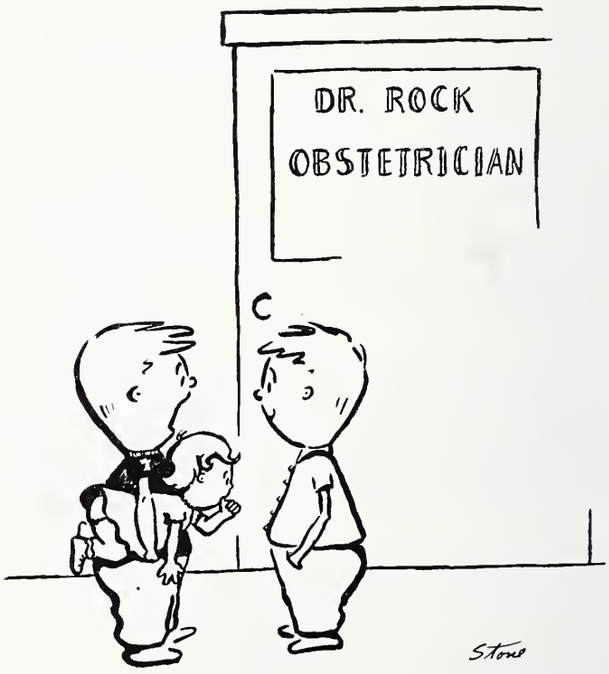
In its 1959-60 biennial report, the board stated that ". . . changes are needed in the state medical scholarship program" adding that the physician supply of the state also is changing.

Med School History Published by AMA, AAMC

From leeches for bleeding patients to space medicine—that's the background against which a new booklet, "The Story of America's Medical Schools," is written. The multicolored, illustrated review of medical education in the United States from colonial to modern times is a joint work of the American Medical Association and the Association of American Medical Colleges.

The condensed history of the academic side of medicine contains three major divisions: What it was, what it is now, and what it hopes to accomplish in the future. Basic format is that of the celebrated *American Heritage* publications with elaborate illuminations and illustrations supporting easily read text.

Single copies may be obtained by physicians who write the Council on Medical Education and Hospitals, American Medical Association, 535 N. Dearborn St., Chicago 10, Ill.



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"You distract him while I put her back in the bag."

McNamara Subcommittee Pumps Forand Plan

Senator Pat McNamara (D., Mich.), chairman of the Senate Subcommittee on Problems of the Aged and Aging, said that the current session of the Congress should provide a balanced program of health services for America's elder citizens through a social insurance system. Obviously referring to Forand-type legislation which he advocates, the senator said ". . . we have waited and temporized and postponed decisions too long."

The statement was issued a week before the subcommittee opened a week of hearings last month at Washington following on-the-road sessions in the east and midwest. Except for one hearing at Miami, the subcommittee conducted sessions in centers of heavy labor population. From the hearings, the subcommittee concluded, according to McNamara, that a seven point federal health program should be enacted. It includes:

—Illness prevention and early diagnosis.

—Adequate coverage of hospital costs.

—Treatment and rehabilitation in a skilled (sic) nursing home or in a supervised program of home nursing care.

—Financial assistance in meeting part of the cost of very expensive drugs.

—A system of social insurance (Social Security) to finance such services.

—Stimulation of research and expansion of demonstration programs for community health services.

—Coverage of those aged, presently retired, who do not qualify for Social Security but (who) are urgently in need of health insurance.

Accompanying the senator's statement was a pamphlet entitled "Fact Sheet on Health Services for the Aged" in which 12 background points were advanced in behalf of Forand-type legislation. Medical observers questioned the validity of some points such as a statement that 30 days is required for recovery from pneumonia and generalities concerning monetary income of older citizens.

Spokesmen for medical organizations raise questions as to the objectivity of the McNamara hearings in view of the senator's outspoken convictions on expansion of federal health programs incorporating tax financing mechanisms.

1960 Medicare Manual Distributed

MSMA's newest how-to-do-it booklet, the 1960 Medicare manual, is off the press and in physicians' offices, according to an announcement by the State Medicare Review Board. The new size, condensed form manual catalogues full program details for physicians participating in the dependent care program. Initial mailings were made last month.

Simplified references include definitions, care authorized from private sources, care not authorized, and special circumstance care. Also included are details on dependent eligibility and the all important identification system. Other sections of the 28 page booklet contain information on provision of drugs, statements of service by physicians, and outpatient care authorities.

Latest innovation in the Mississippi Medicare program is omission of a free schedule. Doctors are asked to charge prevailing fees which would be billed to such patients in the absence of the program. Most restrictions imposed during 1958 have been removed, the Medicare board said, and the general criteria for inpatient care is medical indication for hospitalization and surgical or nonsurgical treatment.

The review board suggests that physicians make manuals available to aids and assistants who prepare claim forms. Additional single copies are available to licensed physicians without charge on request.

Nutrition Symposium Set For Boston, May 19

The influence of food on tooth formation and decay will be discussed during a symposium in Boston, May 19, the American Medical Association has announced.

The symposium is being sponsored by the AMA's Council on Foods and Nutrition, the Harvard School of Dental Medicine, the Massachusetts Medical Society, and the Massachusetts Dental Society.

John B. McDonald, D.D.S., M.S., Ph.D., professor, Harvard School of Dental Medicine, will be chairman of the meeting.

Accredited U. S. Hospitals Up as Canada Quits JCAH

The Joint Commission on Accreditation of Hospitals reported a gain of 95 accredited hospitals in the United States despite a decrease of 228 such institutions during 1959 when the Canadian institutions withdrew from the JCAH program. Dr. Kenneth B. Babcock, Chicago, director of the Joint Commission said that 3,668 U. S.-controlled hospitals now have full accreditation certificates.

Of the total—representing about half the licensed hospitals in the nation—3,635 are those in the 50 states and District of Columbia as well as U. S. and military units abroad. Two are in the Panama Canal Zone, 22 are located in the commonwealth of Puerto Rico, and nine are classified as foreign. JCAH surveyors, usually physicians, conducted more than 1,500 survey visits in the past year, according accreditation or continuation of previous accreditation status to all but 120 institutions. Only 61 hospitals were dropped from the accredited list after survey.

In Mississippi, 26 hospitals in 20 cities are accredited. These include institutions at Bonneville, Clarksdale, Corinth, Greenwood, Grenada, Gulfport, Hazlehurst, Holly Springs, Laurel, Meridian, Pascagoula, Sanatorium, Starkville, Tupelo, Yazoo City, two hospitals each in Columbus, Greenville, Hattiesburg, Vicksburg, and three institutions at Jackson.

Just under 10 per cent of the visitations represented first time surveys for domestic hospitals of which almost three-fourths were accredited. Certification is given on one, two, or three year bases, according to findings of the surveyors.

The Joint Commission is composed of seven representatives from the American Medical Association, seven from the American Hospital Association, three from the American College of Surgeons, and three from the American College of Physicians. Formerly, the Canadian Medical Association was authorized one commission seat which was assigned to AMA when the dominion organized its own internal accreditation program.

JCAH officers are Drs. John I. Brewer, Chicago, chairman, representing the American College of Surgeons; Frank R. Bradley, St. Louis, vice chairman, representing the American Hospital Association; Mr. Stuart K. Hummel, Milwaukee, treasurer, representing the American Hospital Association; and Dr. Babcock, Chicago, secretary and full time commission director. There are three principal executives in the commission's Chicago offices and a field survey staff of 13 physicians.

Hospital Building Boom Is Statewide

Mississippi's hospital and health center construction program hit new highs during April with approval of two new projects in Fulton and Liberty. The Mississippi Commission on Hospital Care, state coordinating agency for Hill-Burton health facility projects, approved construction of the Itawamba County Health Center at $59,000 and the Amite County Health Center at $55,000.

Under the 14 year old program, 112 projects have been completed and are in operation. Total expenditure has been more than $47.5 million of which federal funds account for just under $26 million. At present, 25 Hill-Burton projects are under construction in the state which represent $10 million total outlay and they will add 449 new hospital beds to the Mississippi total.

Approved but not yet under construction are 18 projects designed to supply 486 beds at more than $8 million cost. When completed, present authorized Hill-Burton hospital and health center projects shall have furnished over 4,400 beds at a combined estimated cost of more than $65 million.

Other hospital building programs not under Hill-Burton include the Baptist expansion at Jackson with 44 new beds, the St. Dominic-Jackson Memorial addition of 35 beds, and the mammouth 500 bed permanent Veterans Administration project near the University of Mississippi School of Medicine.

"You make one hell of an anesthesiologist!"

Hospital Building At All-time Peak

Although hospital construction is at an all-time peak, the number of hospital beds in the U. S. is not increasing much faster than the nation's population, the Health Insurance Institute reported.

From the beginning of 1948 to the beginning of 1959, civilian hospital beds increased by 30 per cent while the population climbed 20 per cent, said the Institute.

The Public Health Service gave this explanation for the postwar boom in hospital construction:

"During World War II and for most of the depression decade preceding the war, hospital construction was curtailed, piling up a serious backlog of need. After the war when money, men, and materials became available for peacetime development, a great upturn in hospital construction took place."

The government agency reported that in 1958, more than $1 billion was spent on the construction of civilian hospitals, exceeding the previous high of $947 million in 1951.

When 1959 began, the nation had 1,322,000 hospital beds, up from 1,017,000 in 1948, in addition to nearly 246,000 beds in nursing homes and 134,000 beds for civilians in Federal hospitals.

The hospital beds were divided into 653,000 in general hospitals, 534,000 in mental hospitals, 51,000 in chronic hospitals, and 84,000 in tuberculosis hospitals.

The greatest growth from 1948 to 1959 was shown by the general and chronic hospital beds, said the Institute. The number of general hospital beds increased 39 per cent while chronic hospital beds went up 42 per cent.

MENTAL HOSPITALS

Mental hospital beds rose 25 per cent. However, the number of tuberculosis beds increased less than 1 per cent during the period, and actually declined from a peak of more than 101,000 beds in 1954, which is a reflection of the success medical science is meeting in its fight against the disease.

In a state-by-state breakdown, New York, the nation's most heavily populated state, had the most beds in each of the four hospital categories. New York had 83,000 beds in mental hospitals, 69,000 beds in general hospitals, 7,000 chronic hospital beds, and 9,000 tuberculosis hospital beds.

New York was not the only place to have more mental hospital beds than general hospital beds. Others were Connecticut, Massachusetts, New Hampshire, Rhode Island, Vermont, Maryland, New Jersey and the District of Columbia.

NURSING HOME BEDS

Illinois led the nation in the number of nursing home beds, 23,000. California, where a large proportion of the population is elderly, followed with 21,000 and New York was third with 16,000, said the Institute. The total of these beds has increased 13 per cent in the space of two years, from 218,000 to 246,000.

The number of persons entering hospitals has risen steadily. According to the American Hospital Association, admissions to the nation's nonfederal short-term general and special hospitals, which excludes mental and tuberculosis hospitals, totaled nearly 22 million in 1958, almost 700,000 more than the year before.

'No More Anonymity' Says Drug Maker

The president of a small drug company declared that "the balance on the pharmaceutical industry's ledgers looms more largely in the public eye than the physiologic wonders our products work and for which mankind has waited since time began."

Speaking to the April annual meeting of the Pharmaceutical Manufacturers Association, William C. Conner of Alcon Laboratories, Ft. Worth, Texas, told the prescription drug makers they "no longer toil in blissful anonymity."

In a reference to a current U. S. Senate investigation of the pharmaceutical houses, Conner spoke "as a representative of more than one thousand small companies."

He said, "Whatever further action—on the legislative scene or elsewhere—comes out of the investigation, the smaller segments of this competitive, free-enterprise industry stand to suffer at least as much as the larger segments."

Conner pointed out that nearly a third of the companies in the PMA membership do an annual business of less than $1 million.

He said there are many "A-B-C's" to be learned by the industry in presenting the factual record of its accomplishments in the public interest.

What Kills Mississippi Doctors?

Mississippi doctors fall prey to the same fatal maladies as their patients, according to the State Board of Health's annual study of physician deaths.

Heart disease is the primary killer in the physician population as well as the general public. During the calendar year 1959, heart disease was responsible for 40 per cent of physician deaths.

CAUSE OF DEATH AMONG MISSISSIPPI PHYSICIANS

1958-1959

Cause of Death	*Number of Deaths*	
	1959	1958
Heart diseases	12	16
Malignant neoplasms	3	4
Intracranial lesions	3	3
Generalized arteriosclerosis	2	1
Pneumonia	2	0
Infections of kidney	2	0
Ulcer of stomach	1	1
Diabetes mellitus	1	0
Hypertension without mention of heart	1	0
Hyperplasia of prostate	1	0
Other diseases of circulatory system	0	2
Ulcerative colitis	0	1
Intracranial and intraspinal abscess	0	1
Acute nephritis	0	1
Other diseases of lung and pleural cavity	2	0
Gastrointestinal hemorrhage	0	1
Total	30	31

Among doctors, cancer and vascular system lesions were the second place causes of death, each accounting for 10 per cent of the total. Cancer was the second largest killer in the general population.

Other major causes of doctor deaths were arteriosclerosis, pneumonia, and kidney infections.

"The causes of death in the medical profession vary little from those for the population as a whole, except in one respect," says Dr. A. L. Gray, executive officer of the Board of Health.

Dr. Gray points out that accidents are the fourth leading cause of death in the state, but last year there were no accidental deaths among doctors.

In 1959 the average age of physicians at the time of death was 76.2 years, the highest average noted since state tabulations have been made on the medical group. In 1958 the average age at death was 71.3 for physicians and 66.4 for the state.

Of the 30 Mississippi physicians who died in 1959, the youngest was 51. Only five were under 70 years of age.

NATIONAL AND REGIONAL

American Medical Association, June 13-17, 1960, Miami Beach. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago 10, Ill.

American College of Surgeons, October 10-14, 1960, San Francisco. William E. Adams, Secretary, 40 E. Erie St., Chicago 11, Ill.

Southern Medical Association, October 31-November 3, 1960, St. Louis. Mr. V. O. Foster, Executive Secretary, 2601 Highland Ave., Birmingham 5, Ala.

Gulf Coast Clinical Society, October 12-13, 1960, Biloxi, Mississippi. George W. Rogers, Secretary, P. O. Box 37, Handsboro, Miss.

STATE AND LOCAL

Mississippi State Medical Association, May 10-12, 1960, Jackson. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson, Miss.

Mississippi Academy of General Practice, September 28-29, 1960, Jackson. Miss Louise Lacey, Executive Secretary, Walthall Hotel, Jackson, Miss.

Amite-Wilkinson Counties Medical Society, First Tuesday March, June, September, December. S. E. Field, Centreville, Miss., Secretary.

Central Medical Society, First Tuesday Monthly, 6:30 p.m., Robert E. Lee Hotel, Jackson, Miss. C. G. Sutherland, 918 N. State St., Jackson, Miss., Secretary.

Claiborne County Medical Society. D. M. Segrest, Port Gibson, Miss., Secretary.

Clarksdale and Six Counties Medical Society, Fourth Wednesday March and September, 2:00

p.m., Clarksdale, Miss. Robert R. McGee, 150 Yazoo St., Clarksdale, Miss., Secretary.

Coast Counties Medical Society, First Wednesday March, June, September, and November. Charles N. Floyd, 1412-23rd Ave., Gulfport, Miss., Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Miss., Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando, Miss. L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Miss., Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Monthly, 7:30 p.m., Natchez Country Club, Natchez, Miss. W. T. Colbert, 539 Park Place, Natchez, Miss., Secretary.

North Central District Medical Society, Second Wednesday March and September. W. A. Middleton, 214 Summit St., Winona, Miss., Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December, Tupelo, Miss. Eugene M. Murphey, III, 421 Main St., Tupelo, Miss., Secretary.

North Mississippi Medical Society, First Thursday January, April, and October, Oxford, Miss. R. L. Wyatt, Holly Springs, Miss., Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. George B. Stewart, 215 Kirkwood St., Picayune, Miss., Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. Thomas F. Puckett, 715 Arledge St., Hattiesburg, Miss., Secretary.

Tri-County Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Miss., Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg, Miss. Thomas H. Mitchell, The Street Clinic, Vicksburg, Miss., Secretary.

DEATHS

Davis, Charles Daniel, Plant City, Florida; M.D., University of Tennessee, 1893; practiced in McCondy, Okolona, and Houston, Mississippi, for 60 years; gave the Houston area its first hospital in 1912; Emeritus member of MSMA and member Fifty Year Club; died February 23, 1960, aged 87.

Dorsey, Charles Fleming, Brookhaven; M.D., Tulane University, New Orleans, 1939; interned Baroness Erlanger Hospital, Chattanooga, Tennessee; residency in general practice, Matty Hersee Hospital, Meridian, Mississippi, one year; Captain, U. S. Army, three years; died at King's Daughters Hospital, Brookhaven, February 27, 1960, aged 54.

Fite, Ped L., Columbus; M.D., University of Tennessee, Memphis, 1901; postgraduate surgical training at Tulane University; established the first school of nursing in the Columbus area; died March 9, 1960, aged 79.

Fullilove, Robert Elliott, Yazoo City; M.D., Meharry Medical College, Nashville, 1907; former president Mississippi Medical and Surgical Society; died March 17, 1960, aged 85.

NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

Anderson, Thomas Jefferson, Laurel. Born Ellisville, Mississippi, May 28, 1928; M.D., University of Tennessee, Memphis, 1955; interned St. Vincent's Hospital, Jacksonville, Florida; Captain, U. S. Air Force, two years; elected March 10, by South Mississippi Medical Society.

Graham, James Clinton, Enterprise. Born Richton, Mississippi, October 29, 1929; M.D., University of Mississippi, Jackson, 1958; interned USPHS Hospital, New Orleans, Louisiana; elected March 7, by East Mississippi Medical Society.

Hicks, Herbert Hollis, Washington. Born Calhoun City, Mississippi, December 13, 1929; M.D.,

George Washington University, Washington, D. C., 1954; interned Central Dispensary and Emergency Hospital, Washington, D. C.; general practice residencies University of Colorado Medical Center, Denver, Colorado, and University of Mississippi Medical Center, Jackson, Mississippi, two years; Lieutenant, U. S. Navy, two years; elected March 22, by Homochitto Valley Medical Society.

HULSEY, REX SMITH, Lumberton. Born Hattiesburg, Mississippi, May 22, 1930; M.D., Louisiana State University, New Orleans, 1955; interned University Medical Center, Jackson, Mississippi; Captain, U. S. Air Force, two years; elected March 10, by South Mississippi Medical Society.

IVY, ROBERT EUGENE, Vicksburg. Born Greenville, Mississippi, February 25, 1925; M.D., Tulane University, New Orleans, 1950; interned Minneapolis General Hospital, Minneapolis, Minnesota; residency in pediatrics, Charity Hospital, New Orleans, Louisiana, two years; Lieutenant, U. S. Navy, two years; elected January 12, by West Mississippi Medical Society.

KEYES, PRENTISS FELTON, Hickory Flat. Born Lake Como, Mississippi, May 31, 1926; M.D., University of Mississippi, Jackson, 1958; interned Mid-State Baptist Hospital, Nashville, Tennessee; elected October 1, 1959, by North Mississippi Medical Society.

LUINA, RAMON RAFAEL, Meridian. Born Fajardo, Puerto Rico, January 10, 1924; M.D., Creighton University, Omaha, 1952; interned Fajardo District Hospital, Puerto Rico; residency in radiology, Norfolk General Hospital, Norfolk, Virginia, three years; Lieutenant, U. S. Navy, two years; elected February 2, by East Mississippi Medical Society.

O'KEEFE, JOHN BERNARD, Biloxi. Born Ocean Springs, Mississippi, January 30, 1925; M.D., Tulane University, New Orleans, 1951; interned Charity Hospital, New Orleans, Louisiana; residency in general practice, Conway Memorial Hospital, Monroe, Louisiana, one year; elected March 2, by Coast Counties Medical Society.

RIECKEN, WILLIAM EMIL, JR., Kosciusko. Born Delaware, Ohio, February 16, 1931; M.D., Tulane University, New Orleans, 1956; interned Mississippi Baptist Hospital, Jackson; U. S. Air Force, two years; elected March 16, by North Central District Medical Society.

WILLIS, ROBERT FREDERICK, Jackson. Born Livingston, West Virginia, July 22, 1920; M.D., Medical College of Virginia, Richmond, 1951; interned Charleston General Hospital, Charleston, West Virginia; U. S. Navy, three years; member American Academy of General Practice; elected February 2, by Central Medical Society.

WINSTEAD, WILLIE BENJAMIN, Pascagoula. Born Ellisville, Mississippi, March 7, 1922; M.D., University of Mississippi, Jackson, 1958; interned Moses H. Cone Memorial Hospital, Greensboro, North Carolina; elected November 4, 1959, by Coast Counties Medical Society.

PERSONALS

GEORGE W. WALLACE, Biloxi, was elected to membership in the 50 Year Club, a special honor group of member physicians who have engaged in the practice of medicine for half a century. Presentation of the recognition pin and illuminated certificate was made during special ceremonies conducted by the Coast Counties Medical Society. Dr. Eldon L. Bolton, Biloxi, presided during the presentation occasion, according to Dr. James T. Thompson, Moss Point, president of the society. Dr. Wallace was graduated from the Tulane University School of Medicine in 1906 and following hospital training, he was licensed in 1909. He is a Fellow in the American College of Surgeons and an Emeritus member of the Mississippi State Medical Association.

CURTISS G. BOYETTE, JR., Biloxi, has entered residency training at the Charity Hospital, New Orleans, where he will pursue further postgraduate work.

ALTON B. COBB, Indianola, has moved temporarily to New Orleans for residency training with the Tulane University School of Medicine. He has been associated with the Sunflower County Health Department.

ROBERT E. LEE, Whitfield, is temporarily absent from his post at the Mississippi State Hospital undergoing additional residency training at the Veterans Administration Center in New Orleans.

ANTHONY J. SANTANGELO, Jackson, has completed a residency in psychiatry at the University of Mississippi School of Medicine.

LESTER C. WILLIS, New Albany, has returned to his practice after completing postgraduate training out of state.

TRUSTEES, COUNCILS, AND COMMITTEES

BOARD OF TRUSTEES

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A RECORD OF SERVICE

The Mississippi Blue Cross-Blue Shield Plan achieved an outstanding record of increased services and benefits for its members during 1959.

Membership gains show that over 330,000 Mississippians, more than 15 per cent of the population, are now protected by Blue Cross-Blue Shield. This represents approximately 130,000 non-group members and 200,000 members in employee groups.

Another noteworthy achievement was additional enrollment of Senior Citizens which means that "over age 65" membership has now reached 20,000 or 19 per cent of the total eligible population.

A new high was reached in Blue Cross-Blue Shield member care—approximately 74,000 members were hospitalized, requiring more than 369,000 hospital days of care. In addition 65,852 of these members also received benefits for medical, surgical and obstetrical care. Total benefits received by members for hospital and doctor care amounted to $9,237,450.85.

Blue Cross-Blue Shield accomplishments cannot be attributed to any one person or group of persons. A conscientious Board of Directors, the staff and personnel of the plan are responsible for past achievements and future planning.

A progressive program for 1960 has been outlined. Many new services and benefits will be made available, such as out-patient hospital benefits for surgical care to be included in Series X type contracts. Contract benefits are being revised to more effectively meet current needs and additional revisions will be made as necessary to keep pace with the continually advancing cost for good health care.

For the first time an opportunity is being offered to our Senior Citizens (people over age 65) to add cancer and Catastropic Illness Endorsement for benefits up to $2,500.00.

The Mississippi Blue Cross-Blue Shield Plan is a Mississippi Company and not only provides Mississippians with a voluntary non-profit method of financing hospital and doctor care, but the company plays a very important role in the economic progress and development of the state. The plan actively participates in such programs as the Mississippi Economic Council, Hometown Development, Manufacturers Association, Safety Council, Forestry Association, Delta Council, Municipal Association and many other state and local activities, realizing full well that as good citizens we do have certain community responsibilities.

We are looking ahead with confidence that we will provide Mississippians with the best protection possible for the least amount of money.

Richard C. Williams

RICHARD C. WILLIAMS
Executive Director
Mississippi Hospital & Medical Service

Heart Association Publishes 4 Booklets

Four new booklets designed to help the practicing physician have been published by the American Heart Association.

"If Your Child Has a Congenital Defect" explains to parents the events that may follow a preliminary diagnosis of congenital heart disease in their child, including additional diagnostic tests, hospitalization, surgery, convalescence at home, and the transition to normal living. The booklet provides explanations and diagrams of some of the more common defects which may be completely or partially corrected by surgery and describes sources of community help in obtaining medical and surgical care for congenital heart patients.

The Heart Association's booklet on evaluation and management of congenital cardiac defects has been revised and is available under the new title, "Evaluation and Management of Congenital Cardiac Defects." It was formerly titled, "Congenital Cardiac Defects, a Physician's Guide for Evaluation and Management."

Intended to help the physician determine when referral to a cardiologist is required, the 32-page booklet has been expanded to keep pace with advances in surgical treatment of congenial heart defects.

"Prevention of Rheumatic Fever and Bacterial Endocarditis Through Control of Streptococcal Infections" is a revision of a 1955 publication of the same name. The latest issue gives more prominence to prevention of recurrences of rheumatic fever and rheumatic heart disease through continued prophylaxis.

The Association's booklet "Heart Disease Caused by Coronary Atherosclerosis," recently revised, is designed for heart patients. Contents include a discussion of heart attacks and the process of recovery, an explanation of the nature and treatment of angina pectoris, and a description of the atherosclerotic process.

The booklets may be obtained from the Mississippi Heart Association, 145 E. Amite St., Jackson.

Household Poison Chart Offered by AMA

A hardy reference chart can guide a frantic parent when a child is accidentally poisoned or even help avoid such medical emergencies. So says Dr. Bernard E. Conley, secretary of the AMA Committee on Toxicology, who announced availability of the medicine cabinet card chart recently.

Stressing need for the handy household reference, Dr. Conley said that statistics show some 1,422 persons—355 of them preschoolers—were killed last year where the poison agent was a common household chemical such as detergents, cleansers, and solvents. Besides these preventable deaths, thousands were injured or made critically ill by kitchen cabinet poisons.

"The first aid for poisoning chart serves as both a reminder of the dangers of accessible poisons to small children and as a help in meeting poisoning emergencies," Dr. Conley said. "Its life-saving potential may be equated with its value in educating the public on what to do when poisoning occurs."

As another means of preventing poisonings, the AMA is supporting a bill, now before Congress, that would require household, commercial, and industrial products to carry labels listing their contents.

The cards, suitable for attaching to medicine cabinets, may be obtained free of charge from the Committee on Toxicology, American Medical Association, 535 N. Dearborn St., Chicago 10, Ill.

Pre-Convention Health Meet Set

The Second Annual Pre-Convention Health Meeting is scheduled for June 12, immediately prior to the Annual Meeting of the American Medical Association.

Sponsored jointly by the AMA and the American School Health Association, the conference will be held in the Medallion Room of the Carillon Hotel in Miami Beach.

The program will consist of a scientific panel on school health followed by general discussion.

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NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

June 1960

Dear Doctor:

Fast-breaking developments on health care of the aging may soon shove U-2's, Khrushchev, Berlin, and the practice of summitry off page one. Although Forand as such seems out for present, there's still a possibility of eldercare legislation in present session of Congress. The new administration plan, the Javitts subsidy-of-insurance proposal, and watered down Social Security measures for hospital care only are all worth watching.

> "The administration proposal is based on the false premise that almost all persons over 65 need health care and cannot afford it." This was AMA President Louis M. Orr's answer to the Flemming idea. Ways and Means Committeeman Burr Harrison (D.,Va.) says that any enactment in care of aging now would "...be a monstrosity."

Dr. Merrill O. Hines, Jackson native, has just succeeded another Mississippian as medical director of the Ochsner Clinic at New Orleans. Hines, since 1954 assistant medical director and chief of proctology, moved up when Dr. Guy A. Caldwell recently retired.

Milk is a "healthy" drink - but only in the context of where it comes from and who's to consume it. The hospital in South Africa where Premier Verwoerd was being treated changed dairies hastily when authorities found milk for patients was being purchased from David Pratt, the farmer who shot Verwoerd in the April assassination attempt.

Almost 80,000 Mississippi old age pensioners received about $2.4-million under public welfare in April. Other and additional payments included $244,440 to 6,300-plus blind; over $338,000 to 11,000 permanently disabled; and $815,000 to 60,000 dependent children. Annual welfare program is hitting about $40-million, half of which is federal money.

Next big stop for medical meeting goers is Miami Beach where AMA's 109th Annual Session convenes June 13-17. The sub-tropical super convention center offers over 30,000 air conditioned hotel rooms and the biggest scientific program ever. Mississippi's Governor Ross R. Barnett is a featured speaker on June 12 at the conference of state association officers.

Sincerely,

Rowland B. Kennedy

Rowland B. Kennedy
Executive Secretary

Controversy Continues Over Value Of 'Immune Milk' In Allergy Relief

Chicago - AMA maintains steadfastly that so-called immune milk is apparently worthless in management of allergy cases but two Minnesota investigators report good results in work with more than 1,000 patients. Latter production technique is unusual: Cows injected with allergens immediately "postpartum" are said to produce non-allergenic milk. Cost is almost prohibitive - up to $1 per quart. Critics say any immunity induced is, at best, passive and that use may be dangerous in some cases.

Federal Aviation Agency Sets Firm Ruling On Pilot Exams

Washington - Civil Air Surgeon James L. Goddard has apparently put the lid on a year-long controversy over professional qualifications for physicians performing medical examinations of Class II and III airmen. Effective June 15, says Dr. Goddard, commercial, student, and private pilots will be seen by designated medical examiners - which means that FAA will do the designating. In an apparent effort to soften the edict, Goddard said that "...any physician may be considered eligible for designation as an examiner" but doctors must apply to FAA, presumably meeting stated criteria. Order does not affect examinations for airline pilots who are seen by specifically selected physicians. At present, 2,000 designated examiners perform 240,000 air physicals annually.

Capital City Daily Hits Cancer Quacks

Jackson - Doctors are tossing bouquets at the State Times, Jackson afternoon daily, for its high impact feature series on cancer quackery. The three-part, magazine-length illustrated study covered almost every phase of such charlatans' activity as they prey upon a gullible - and usually desperate - public. The series was published as a public service in cooperation with the American Cancer Society.

Legionnaires Initiate Program To Employ The Aging

Indianapolis - The American Legion's newest national service program will focus attention on jobs for the aging when promotion begins on "National Employ the Older Worker Week." Legion officials agree with medicine that arbitrary, forced retirement, based upon chronological age, is unfair and impractical. Movement is picking up support but there's little chance that big labor, meaning AFL-CIO, will be among boosters.

Curtis Debunks British Health Nationalization

St. Louis - Representative Tom Curtis (R.,Mo.), brilliant champion of free enterprise and bitter foe of Forand-type legislation, recently focused attention on British woes with socialized medicine. Cost of program, he says, continues to mount as services get worse and bureaucracy has taken over with one out of every 100 Englishmen now working for health ministry. Average hospital stay is 20 days against seven in U.S. and no new hospitals have been built since 1945.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

June 1960, Vol. I, No. 6

Jaundice During the Neonatal Period

ARTHUR E. McELFRESH, M.D.

Philadelphia, Pennsylvania

The appearance of jaundice during the first week of life may be normal or may indicate an abnormal condition demanding immediate diagnosis and therapy. Regardless of the etiology, indirect bilirubin levels in excess of 20 mg. per 100 ml. are associated with kernicterus in increasing frequency as the level rises. Full term infants are in danger of such concentrations for the first five days of life, premature infants for seven days. Etiology, causes, and treatment of neonatal hyperbilirubinemia are discussed. The author concludes, "The performance of regular rounds to observe the initial appearance of jaundice is the only method for satisfactory early detection of hyperbilirubinemia not resulting from Rh incompatibility."

JAUNDICE APPEARING DURING the first week of life may be normal or, by its time of appearance or its severity, may indicate an abnormal condition requiring diagnosis and therapy. In addition to the significance of jaundice as a symptom of disease, jaundice is unique as a symptom in that the icterus itself may be detrimental during the newborn period. Prompt therapy for hyperbilirubinemia may prevent death or severe central nervous system damage.

ETIOLOGY OF NEONATAL HYPERBILIRUBINEMIA

The destruction of a gram of hemoglobin results in the production of 34 mg. of bilirubin which is initially present in serum in the "indirect" or unconjugated form. This bilirubin is normally conjugated in the liver to bilirubin glucuronide; the conjugation is catalysed by the enzyme glucuronyl transferase which enhances the transfer of glucuronide from uridine diphosphoglucuronic acid (UDPGA) to bilirubin resulting in "direct" reacting bilirubin glucuronide. The hepatic immaturity of the neontal liver is related to a deficiency of the enzyme glucuronyl transferase; this deficiency is even more marked in the premature infant. Physiologic jaundice, which occurs from the third day on in about one-half of normal infants, is the result of deficient concentrations of this enzyme which prevent the normal conjugation and excretion of bilirubin. If one wishes to set an arbitrary limit for the normal bilirubin concentration, one may say that the normal full term infant's concentration rarely exceeds 12 mg. per 100 ml. and that of the premature infant should not exceed 15 mg. per 100 ml. Neither group should become jaundiced before 36 to 48 hours; the appearance of jaundice prior to this time should suggest some abnormal process.

From the Department of Pediatrics, Temple University School of Medicine.

Read before the Section of Pediatrics, 92nd Annual Session, Mississippi State Medical Association, Jackson, May 10-12, 1960.

The presence of such jaundice is not only indicative of some abnormal process but is of itself harmful. Indirect bilirubin levels in excess of 20 mg. per 100 ml. are associated with kernicterus in increasing frequency as the level rises. With concentrations between 20 and 25 mg. approximately 7 per cent of infants develop kernicterus. This incidence rises to 30 per cent when the serum bilirubin exceeds 30 mg. per 100 ml.

CAUSES OF HYPERBILIRUBINEMIA

Hyperbilirubinemia resulting in kernicterus almost always begins during the first 48 hours of life. The possible etiology of the jaundice is usually one of the following:

1. Erythroblastosis fetalis resulting from Rh incompatibility
2. ABO incompatibility
3. Sepsis
4. Congenital microspherocytosis
5. Toxoplasmosis
6. Cytoplasmic inclusion body disease

Some of the causes listed result in elevated levels of bilirubin because of an increased hemolysis of erythrocytes and others because of hepatic damage. In either case there is elevation principally of indirect bilirubin, and it is this bilirubin which is responsible for kernicterus.

BLOOD GROUP INCOMPATIBILITY

In most of the United States today the problem of erythroblastosis resulting from Rh incompatibility is handled efficiently. The Rh typing of mothers in widely practiced and anti-Rh titres are commonly determined during the pregnancy of Rh negative women. A Coombs test is routinely performed upon the cord blood of infants born to Rh negative women, and infants whose Coombs test is positive are carefully watched to determine whether or not therapy is required.

When we turn from Rh incompatibility to the problem of hyperbilirubinemia resulting from ABO incompatibility, the diagnosis is less often suspected and is serologically difficult to confirm. In the experience of our clinic, however, with an obstetrical population which has a high percentage of negroes, and thus a low percentage of Rh negative mothers, exchange transfusion is performed more frequently for presumed ABO incompatibility than for Rh incompatibility.

ABO incompatibility occurs in a similar fashion to that resulting from the Rh factor. As an example, a mother whose blood group is O develops antibodies against type A erythrocytes when she carries an infant whose blood group is A. The antibodies then cross the placenta and hemolyse the infant's erythrocytes. A similar mechanism may occur whenever the mother and infant are heterotypic in the ABO groups. There is no relation between the number of pregnancies and the appearance of ABO incompatibility as shown in Table I.

TABLE I

Parity	*No. of Mothers*
0	12
1	20
2	9
3	5
4	3
over 4	3

The relation between parity of the mothers and the appearance of ABO incompatibility in 52 infants.

The infant with hyperbilirubinemia resulting from ABO incompatibility presents few signs or symptoms other than jaundice; hepatosplenomegaly is rare, the anemia is of only slight to moderate severity, and edema is virtually unknown.

The serologic proof of ABO incompatibility is extremely difficult to secure and is virtually impossible in relation to the individual infant. The Coombs test of the infant's blood is usually negative and the material anti-A or anti-B titre often does not rise to significant levels until after parturition. We have been baffled by all attempts to prove the diagnosis with studies upon the infant's blood since we have eluted anti-A antibodies from an equal percentage of jaundiced and non-jaundiced infants. This is shown in Table II. We suspect

TABLE II

	Number	*Number Icteric*	*Per Cent Icteric*
Positive elutions	12	4	33
Negative elutions	76	28	36

The relationship between the elution of antibodies from infants' erythrocytes and the appearance of jaundice.

that many heterotypic infants received antibodies from their mothers, but only a few show any manifestations, Thus, with virtually no signs or symptoms other than jaundice and with no screening or confirmatory serologic studies, the diagnosis must be sought by regular "jaundice rounds" made by

nurses every eight hours during the change of shifts. All infants who are less than 48 hours of age should be carefully examined for icterus; any jaundiced infant should immediately have a determination of his serum bilirubin and an attempt should be made to ascertain the etiology of his jaundice.

CYTOMEGALIC INCLUSION BODY DISEASE

This interesting illness is probably more common than is appreciated. It usually presents during the neonatal period with anemia, jaundice, thrombocytopenia with purpura, and hepatosplenomegaly. The etiologic virus has been isolated and is probably identical (or closely related) to the ubiquitous salivary gland inclusion virus. The infant acquires the infection in utero. The disease may be readily diagnosed by finding the typical inclusion-bearing renal tubular cells in the urine. The specimen should be centrifuged and the sediment smeared on a slide and fixed in a mixture of equal parts of ether and alcohol within an hour of being voided. Although the illness is frequently fatal or results in devastating damage to the central nervous system, we have followed two infants whose retardation is only slight and other such infants are recorded. There is no specific therapy, but it has been suggested that kernicterus may account for some of the mental damage and that exchange transfusion may be indicated to control the concentration of bilirubin.

TOXOPLASMOSIS

This illness, resulting from infection by Toxoplasma gondii, is also acquired in utero. The infant presents symptoms and signs similar to those described for cytomegalic inclusion body disease. The diagnosis can be confirmed by studies of the infant's serum for dye test or complement-fixing antibodies. There is no specific treatment.

CONGENITAL MICROSPHEROCYTOSIS

On rare occasions infants who have inherited this congenital hemolytic disorder may have a severe hemolytic episode during the first week of life and kernicterus has resulted from such a crisis. We believe that exchange transfusion is the treatment of choice during the first week of life and that splenectomy should be postponed until the infant has recovered from his anemia and hyperbilirubinemia.

Although septicemia is the most common cause of jaundice in older infants, it is somewhat uncommon during the first 48 hours of life. It does occur, however, and may be suspected if there has been premature rupture of the maternal membranes or if other signs such as umbilical infection are present. Unlike the infant with jaundice resulting from ABO incompatibility, the infant with infection usually shows other signs such as lethargy, poor feeding or a weak cry.

TREATMENT

Regardless of the cause of hyperbilirubinemia, in our current state of knowledge, exchange transfusion is indicated whenever there is evidence that the serum concentration of bilirubin will reach 20 mg. per 100 ml. Diamond and Allen have provided us with a chart which allows us, on the basis of their vast experience, to predict the need for exchange transfusion in infants with erythroblastosis resulting from Rh incompatibility by the result of bilirubin determinations performed upon cord blood or during the first day of life. For the other causes of hyperbilirubinemia, however, no such experience exists. One must base his decision regarding exchange transfusion upon either a concentration approaching 20 mg. per 100 ml. or upon serial measurements which indicate a rapid rise in the concentration. Since hyperbilirubinemia resulting from ABO incompatibility is often detected when the bilirubin is high, multiple exchange transfusions are often required. We have performed five upon one such infant. The bilirubin concentration of the full term infant usually levels off at four to five days of age; that of the premature infant may rise until the seventh day.

The blood for the exchange transfusion should have the major side of the crossmatch performed against the mother's serum since any deleterious antibody which the infant may have received will be present in the mother's serum in a much higher concentration. We feel so strongly regarding this point that we have occasionally postponed treatment until maternal blood could be obtained.

SUMMARY

Hyperbilirubinemia and jaundice may result from a variety of causes. Regardless of the etiology, elevated concentrations of indirect bilirubin produce kernicterus in an increasing frequency as the concentration exceeds 20 mg. per 100 ml. The full term infant is in jeopardy from such concentrations for the first five days of life; this period extends to seven days for a premature infant. The performance of regular rounds to observe the initial appearance of jaundice is the only method

for satisfactory early detection of hyperbilirubinemia not resulting from Rh incompatibility. Regardless of the cause of the hyperbilirubinemia, exchange transfusion presently affords the only satisfactory method of lowering the serum bilirubin concentration. The donor blood for exchange transfusion should be crossmatched on the major side against the maternal serum. ★★★

2600 North Lawrence Street

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THE AGING PROCESS

Three silver-haired, elderly gentlemen were seated in the park discussing their personal philosophies for achieving a ripe old age.

"I'm eighty-six," said the first, "and I wouldn't be here today if I hadn't scorned tobacco, alcohol, late hours, and other sinful enticements."

"I owe my ninety-three years to a strict diet of black strap molasses, wheat germ bread, and whole milk," observed the second senior.

Nervously, the third man explained: "When I was eighteen, I was told that if I wanted to enjoy life, I should smoke black cigars, drink nothing but hard liquor, and carouse every night—and that's exactly what I've done."

"Incredible," said the first, "and just how old are you?"

"Twenty-two."

A Simplified Approach to The Study of Human Genetics

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A knowledge of genetics can be a useful diagnostic tool to the practicing physician. An attempt is made to correlate the theoretical and clinical aspects of genetics by a presentation of a simplified approach based on the use of an easily reproducible schema. Examples of inherited ocular diseases are presented.

A KNOWLEDGE OF GENETICS is useful in the diagnosis and prognosis of diseases and anomalies if for no other reason than that it serves to insure an awareness on the part of the physician that he may be dealing with an heritable condition. An attempt will be made to correlate the theoretical and clinical aspects. Examples of inherited ocular diseases and anomalies with pedigrees will be presented.

CELL DIVISION

Some of the knowledge regarding the gene theory of inheritance is based on microscopically visible changes such as the difference in behavior of chromosomes of somatic cells and cells of the germ plasm during cell division. In the former, chromosomes can be seen to divide longitudinally before the nucleus divides; thus each daughter cell is a duplicate of the mother cell. In contrast, when cell division takes place in the germ cell as in maturation of ova and sperm, there is dissociation of the pairing of chromosomes, reducing the number in man to 23. Fertilization restores the normal complement of 46; 23 from the mother, 23 from the father. (For more than three decades students have memorized "48" as the number of the human chromosomes. However, the application of new tissue-culture technics to the study of human chromosomes has shown conclusively that the correct number is 46.)

CHROMOSOMES

Little differences can be seen in 22 pairs of chromosomes, and they are called autosomes. The 23rd pair are the gonosomes. Genes located on this pair are gonosomal (sex-linked). Sex chromosomes of the female are barely distinguishable from autosomes and are termed XX. In males one of the sex chromosomes is like those of the female X, but the other of the pair (Y) is visibly shorter.

Figure 1 demonstrates the fundamental difference in behavior of the nuclei of somatic and germ cells. In 1915 Morgan hypothecated the existence of individual bodies, genes, residing on the chromosomes as the determiners of hereditary traits.

FIGURE 2

The first part of Figure 2 depicts a pair of autosomes (or XX sex chromosomes) bearing a hypothetical gene for a pathological trait identified by a plus (+) symbol and its allele, a gene for normalcy identified by a minus (−) sign.

The second portion of Figure 2 contrasts figuratively the appearance of XX chromosomes (or autosomes) with sex chromosomes of the male, X-Y. This visualization is useful in comprehending the modes of transmission in gonosomal inheritance. It can be seen that both the X and the Y chromosomes of the male have portions with no counterpart on its homologue so that a recessive gene located on either unpaired portion of the X or Y will be expressed because of the absence of any modifying allele. Genes located on the homologous portions with one exception behave similarly as if on a pair of autosomes. Thus gonosomal inheritance has two distinguishing features: 1. There is an obvious relationship between the

Read before the regular meeting of the Central Medical Society, Jackson, February 2, 1960.

Illustration 1 is that of a mother and her children exhibiting the syndrome of embryonic fixation (Waardenburg) consisting of blepharophimosis, ptosis, epicanthus, and wide intercanthal distance. The pedigree (Fig. 7) shows the mode of transmission to be autosomal dominant and exhibits the strikingly different results of two marriages by the man who was normal.

Illustration 2 shows example of coloboma of iris and choroid in mother who has nystagmus and poor vision.

Illustration 3 shows child of mother in illustration 2. The young girl has coloboma of iris in one eye only. The pedigree (Fig. 10) demonstrates irregular dominance and variability of expression.

Illustration 4 is that of sisters and cousin exhibiting generalized albinism resulting from the marriage of sister and brother to brother and sister. This is a good example of recessive autosomal inheritance. From the pedigree (Fig. 9) one can conclude that the gene was present in both families, a requisite of expression in a recessive autosomal gene.

DIAGNOSIS: BEST'S DISEASE

Illustration 5 (below), a fundus photograph, is that of a child first seen in 1952 at the age of six. His visual acuity was 20/50 R, 20/30 L, corrected and uncorrected. The etiology of the defect was unknown until a seven-year-old brother with an identical picture was seen. The family folder held the key. When all the children were examined, a third male, age four, presented the same condition. A sister, age two, when last seen was normal. The diagnosis appeared to be a variant of Best's Disease, congenital macular and paramacular atropic defect. Neither vision nor appearance has deteriorated measurably since the beginning of observation. The parents are normal, but the maculae of the maternal grandfather is abnormal, however not to the degree of the children. This may prove to be inherited in recessive X-chromosomal mode as suggested by the pedigree (Fig. 8).

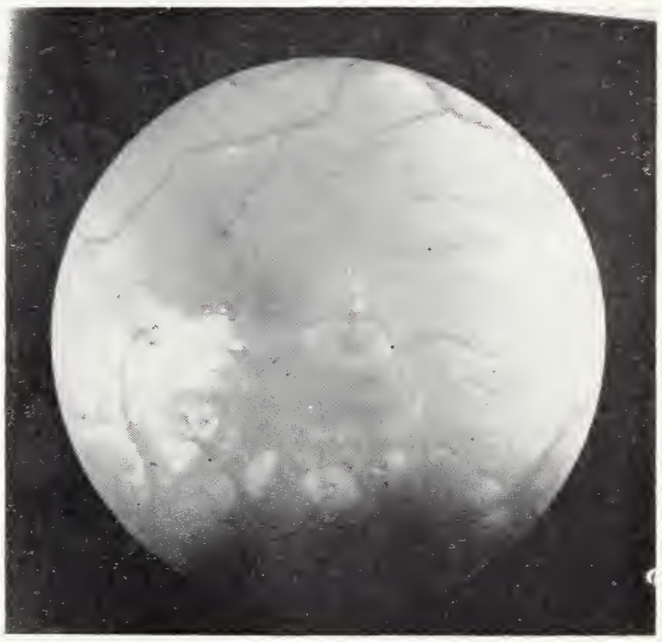


Illustration 5—fundus photograph. The defect which is macular is bilateral, and presents a mottled appearance with striations radiating peripherally.

pathological trait and the sex of the individual. 2. A recessive gene located on either nonhomologous portion will be expressed.

The present day concept of the gene is that it is a complex protein molecule similar in some aspects to a virus but living in a civilized community of genes. Its action is apparently enzymatic. Mutations seemingly arise by molecular changes similar

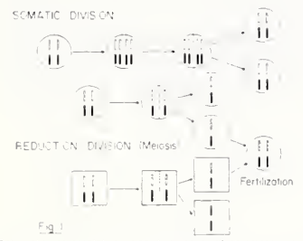


Fig. 1 Schematic representation using two pairs of chromosomes to contrast behavior of nucleus in somatic and reduction division. Adapted from Sisby.

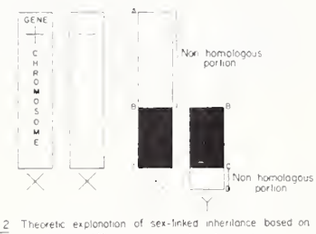


Fig. 2 Theoretic explanation of sex-linked inheritance based on morphologic differences in x and y chromosomes.

to formation of different compounds in chemistry giving rise to effects which, for the most part, are undesirable and therefore pathological. Fortunately, pathological traits are largely produced by the action of a pair of genes rather than the complicated pattern of polygenic inheritance underlying most normal traits. The position of a gene on a given chromosome is termed its locus. Its allele occupies a similar locus on the other homologous chromosome. If the alleles express the same trait, the individual bearing them is homozygous and the genes exist in the duplex state. If the alleles are different, the individual is heterozygous, the gene existing in the simplex state. If the effect of one gene tends to dominate or obscure that of its allele, it is said to be dominant and the second is recessive in relationship to the first. An individual homozygous for a trait must of necessity exhibit it. In an heterozygous individual a pathological trait will be expressed if dominant and not expressed if recessive. By genotype is meant genetic constitution, whereas phenotype refers to clinical status. A person bearing a gene determining a pathological trait must of necessity be a carrier, but the term is usually reserved to apply to one who carries the gene but exhibits no abnormality himself (genotypically abnormal, phenotypically normal).

MODES OF INHERITANCE

I. Autosomal
   A. Dominant
   B. Recessive
   C. Intermediate
II. Gonosomal
   A. Dominant
   B. Recessive
   C. Partial
   D. Intermediate

Autosomal dominant inheritance can be and is usually transmitted by one affected parent to half of all offspring without regard to sex. Unaffected persons do not transmit except as in irregular dominance resulting in the well-known phenomenon, "skipping of a generation." The occurrence of an heritable trait in three successive generations without regard to sex can be proven to be dominant. Late onset of traits such as glaucoma and cataracts may delay proof.

RECESSIVE AUTOSOMAL

Recessive autosomal must be deduced from indirect evidence such as the occurrence of two cases in same sibship, or other cases in collateral branches of the family. Consanguinity is of significance because of the greater likelihood of members of the same family bearing the same mutant gene. Neither parent exhibits but each carries the gene so that when a double dose occurs (homozygous) an affected child is the result. Autosomal intermediate is almost impossible to diagnose.

Dominant gonosomal is uncommon and manifests itself by there being twice as many affected females as males in a given pedigree because of there being twice as many X chromosomes in females.

Recessive X chromosomal transmission is quite common in ophthalmology and results in affected

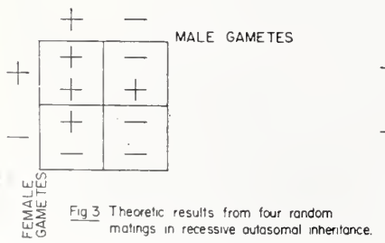


Fig. 3 Theoretic results from four random matings in recessive autosomal inheritance.

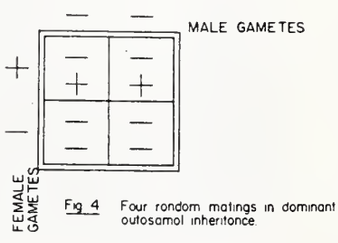


Fig. 4 Four random matings in dominant autosomal inheritance.

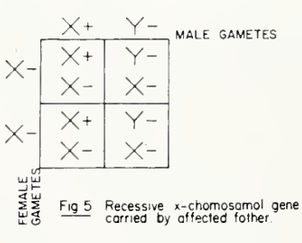


Fig. 5 Recessive x-chomosomal gene carried by affected father.

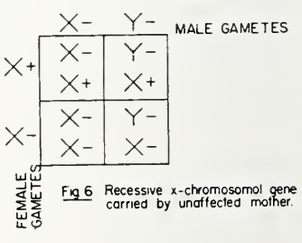
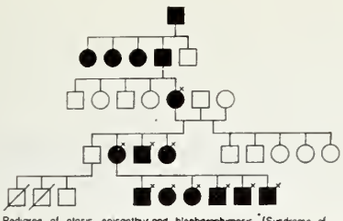


Fig. 6 Recessive x-chromosomal gene carried by unaffected mother.



Pedigree of ptosis, epicanthus and blepharophimosis (Syndrome of embryonic fixation Waardenburg)
Fig 7

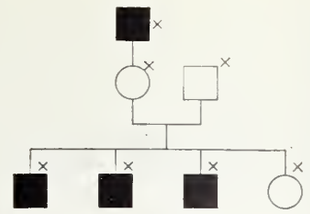


Fig 8 Bilateral macular lesion in children suggestive of recessive x-chromosomal inheritance

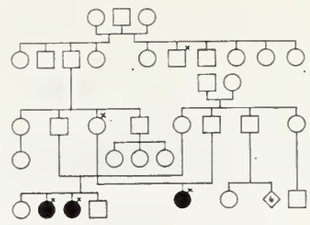


Fig 9 Generalized albinism. Recessive autosomal

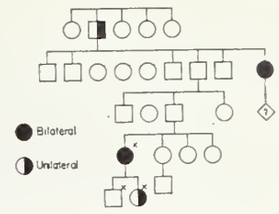


Fig 10 Coloboma of iris and choroid showing variability of expression and lack of penetrance (irregular dominance)

males transmitting via females, who are all carriers, to half of their sons. Half of their daughters are also carriers. For example, an affected grandfather has normal daughters (phenotypically) who are all carriers and normal sons who cannot transmit. Half of the granddaughters are carriers, and half of the grandsons are affected.

PARTIAL SEX-LINKED

Partial sex-linked refers to transmission of traits by genes located on the homologous portions of X and Y chromosomes and the results do not materially differ from results in autosomal inheritance.

Some X-borne genes show neither true dominance nor recessiveness in the heterozygous female. Sorsby and others have shown that choroideremia is inherited in an intermediate X-chromosomal manner, the heterozygous female suffering no functional disability but presenting a recognizable fundus picture. In the hemizygous male the result is choroidal atrophy, with eventual blindness. Likewise Falls and Cotterman have demonstrated a similar situation possible in retinitis pigmentosa or closely allied chorioretinal degeneration. Falls also studied two families exhibiting ocular albinism. The importance of these significant observations lies in the ability to detect the female carrier for purposes of genetic counseling.

SYMBOLS

In order to correlate theory and clinical application, I find it useful to employ symbols and the usual box method to depict results in four random matings. If one uses a plus (+) sign for a gene determining a pathological trait and a minus (–) sign for a gene determining trait for normalcy situated on a chromosome of a gamete, he can rapidly calculate theoretic expected results. A double line around the box is used to denote dominance. In the case of gonosomal inheritance one simply uses X and Y symbols and adds plus (+) or minus (–) to denote genes for pathology or for normalcy. The advantage of this system is its reproducibility which enables one to see quickly what the theoretic results should be.

For example, Figure 3 shows the results of mating two heterozygous individuals bearing a gene transmitted in recessive autosomal manner as one homozygote, two heterozygotes, and one homozygote for normalcy. In clinical terms, one affected, two carriers, one normal: the well known 1:3 (25 per cent) ratio of Mendelian inheritance.

Figure 4 demonstrates the use of a double line to denote dominance and shows autosomal dominant inheritance in ratio of one affected to one normal (50 per cent).

FIGURES 5 AND 6

Figures 5 and 6 depict recessive X-chromosomal and demonstrate the difference in outcome depending upon whether an affected father or a carrier mother is the transmitting parent. For example, in Figure 5 where the father is affected, all the daughters are carriers and no sons are affected; whereas in the situation existing in Figure 6 where the mother is the carrier, half of the daughters are carriers and half of the sons are affected.

SUMMARY

The physician who would counsel must remember that the same or related condition may be transmitted in more than one mode and that before any valid advice can be given, the patient and his family must be individualized. There will be a great opportunity and responsibility for medicine in this field, however, as the general level of education and social consciousness rises. ★★★

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Chorio-Adenoma Destruens—Case Report

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Hydatidiform mole, which is formed by the proliferation of the chorionic villi, resulting in a mass of cysts that resembles a bunch of grapes, has an incidence of about one in 2,000 pregnancies. Once diagnosis is established, immediate evacuation of the uterus is indicated. Careful follow-up of the patient is imperative because of the potential of malignancy inherent in such cases. Persistent symptoms, along with the continuance of a positive Friedman, may indicate the presence of a chorio-adenoma destruens, a lesion lying entirely within the myometrium or in the cornu and thereby inaccessible to the curet. Etiology and treatment are discussed, and a case report is presented.

HYDATIDIFORM MODE OCCURS about once in 1,500 to 2,000 pregnancies. It may be defined as a hydropic swelling or degeneration that occurs in the connective tissue or stroma of the immature chorionic villus with resulting segmental or grape-like swelling of the villous branches. Its formation is often accompanied by variable degrees of trophoblastic hyperplasia, anaplasia, and neoplasia. It usually occurs at any age or gravity during the childbearing period. It is interesting to note that its conception is apparently due to, or at least associated with, absence of a functioning circulation within the immature villous but in the presence of actively functioning trophoblast. It does not occur very commonly with more mature chorions, which do give evidence of having functioning fetal circulation. The chorions of two-thirds of blighted or defective ova appear to be the seat of early but definite hydatid swelling of the villous stroma, and thus constitute the early or subclinical phase of hydatidiform mole.

Hydatidiform moles are usually delivered at about 17 to 18 weeks' gestation. All gradations may be seen in the laboratory, from the simple blighted ovum with a minimal hydatid change, to the classic mass of large, swollen vesicular villi in a characteristic specimen. In the clinical course vaginal bleeding almost always occurs. The reason for this is quite evident because the loculi of intracellular edema increase and ultimately coalesce, thereby converting the villous branches into progressively enlarging cystic structures, thus distorting the usual form of the ova sac and disrupting normal development of placenta. The intervillous space, as such, which contains and regulates the flow of maternal blood, is destroyed. In effect, the whole uterine cavity thus becomes the intervillous space, thereby allowing blood to escape into the vagina.

Uterine enlargement, out of proportion to its gestational age, is frequent, although by no means universal. Since the fetus is almost universally absent or stunted, no fetal heart tones are audible. No fetal skeleton is visualized by x-ray. The urine often, but not invariably, shows high levels of chorionic gonadotropic hormone. The passage of the typical hydatid grape-like bodies is, of course, informative, but unfortunately seldom happens.

The treatment is immediate evacuation of the uterus once the diagnosis is suspected or established. Careful curettage with a large blunt curet may be done. A sharp curet is sometimes used, but its use may increase the risk of perforation of the uterine wall. The follow-up care of the patient is important because of the universally recognized, though only moderate, potential of malignancy inherent in such cases. The patient should be cautioned against becoming pregnant during the ensuing year in all cases. As a general rule, it is well to perform a Friedman test six to eight weeks following the evacuation of the contents of the uterus. If positive, further investigation and treat-

From the Obstetrical and Gynecological Section of the Street Clinic and Mercy Hospital.
Read before the Section on Obstetrics and Gynecology, 92nd Annual Session, Mississippi State Medical Association, Jackson, May 10-12, 1960.

ment are necessary. Persistent symptoms, along with continuance of positive Friedman, may be explained by the presence of the so-called chorioadenoma destruens. This lesion lies entirely within the myometrium or in the cornu and is thereby inaccessible to the curet. The still rarer lesion is the chorion epithelioma (choriocarcinoma of Ewing) whose malignant trophoblast readily invades the myometrium. In regard to these latter two conditions with a persistent subinvolution, continuation of bleeding, and positive Friedman test, both are usually due to retained but inaccessible trophoblast, and hysterectomy is indicated. It is agreed by most authors that in the absence of malignancy the ovaries would best be conserved.

CASE REPORT

Mrs. A. O. P., a 29-year-old white housewife, first consulted me on November 22, 1950, with the following chief complaint and presenting illness. The patient stated that she had had her last normal menstrual period about June 10, 1950. Around the middle of September she noted some spotting of blood from the vaginal cavity, and after this continued for about 10 days, she had a profuse bleeding spell with passage of large clots and cramping in the lower abdomen. She was hospitalized and had a curettage. There was no history of passing any grape-like bodies at that time. Following the curettage, she improved for a few days as far as bleeding was concerned, but continued to have some serosanguineous discharge from the vaginal cavity for about three weeks. The flow checked entirely for two weeks; then she had an apparently normal menstrual flow lasting the usual four to five days with a moderately heavy flow and a few small clots. She continued to have a serosanguineous discharge for 10 days, and this checked up only two or three days before her initial appointment with me. There had been no other unusual change in her general health except for some nervousness and anxiety over her condition.

Past History. She has one child living and well, age 14 months. She had had no other pregnancies prior to onset of present illness. Menstrual periods began at age 14, usually were regular every 28 to 30 days with flow lasting four to five days and very little discomfort except for slight cramping during the first day of flow. Venereal disease was denied by symptoms. There was no history of any serious injury or illness, and she had had no previous surgical procedure other than the dilatation and curettage.

Physical Examination. She appeared to be a well-developed, well-nourished female of apparent age of 29 years who did not seem acutely ill. Temperature was 98.6, pulse 84, respiration 18, blood pressure 120/84. The general examination was not remarkable. Pelvic examination showed the vaginal introitus to be parous, with no enlargement of Bartholin glands, no relaxation of the vaginal walls. There was slight serosanguineous discharge noted from the external os of the cervix. Cervix showed an old bilateral laceration, and was otherwise normal. The uterus was rather large, boggy, slightly tender, and in a retroverted position. It was lifted forward without too much difficulty. The pelvis was free of masses and the cul-de-sac was entirely normal. Rectal examination showed nothing abnormal.

The patient was admitted to Mercy Hospital November 24, 1950, after a Friedman test taken on November 22 was found to be positive. Diagnostic curettage was done on November 25, at which time several small, grape-like cystic masses about one-half centimeter in diameter were noted in the curettings. In the fundus, one area felt very soft on the left side. Upon completion of the curettement, a small piece of packing was placed in the uterine cavity. This was removed in 24 hours.

TISSUE EXAMINATION

Tissue examination by Dr. R. H. Fenstermacher was as follows: "Sections of the specimen show placental tissue composed of collection of placental villi and trophoblastic cells. In some locations, the placental villi are fairly normal in appearance, while in others there is extensive degenerative change and necrosis, and in still other areas the villi are markedly dilated, swollen, and cystic, and stroma is sparsely vascular. In some scattered locations the trophoblastic cells are undergoing fairly marked proliferation and are piled up to many layers in thickness. The trophoblastic cells are generally fairly large and somewhat hyperchromatic. In other locations, the trophoblastic cells are essentially normal and are not undergoing proliferative change and hyperplasia. All of the changes in the villi and the trophoblastic cells are characteristic of the so-called hydatidiform mole. It is possible, however, that marked trophoblastic cells activity must be considered as a possible premalignant lesion. This patient should be checked for continued post-positive pregnancy test within a week to ten days, and if this indicates a continuation of the growth of the placental tissue, a hysterectomy would be advisable. The diagnosis at this time is hydatidiform mole with fairly marked trophoblastic activity."

When the patient returned on December 2, 1950, the uterus was still enlarged and retroverted.

She did not have any bleeding at this time. A recheck on the Friedman test showed it to be still definitely positive. Therefore, this patient was readmitted to Mercy Hospital on December 6, 1950, for hysterectomy.

Uterus and appendix were completely removed on December 7. On the left side of the uterus near the entrance of the tube was an enlarged vascular area which was rather soft in consistency. Patient was given one pint of blood during the operation and recovery was uneventful.

PATHOLOGICAL REPORT

Pathological report on surgical specimen by Dr. Fenstermacher as follows: "An indurated, red, brown, and pink nodule measuring approximately 18 x 6 x 16 mm. is present in the left cornu of the uterus. This nodule appears to extend into the underlying uterine muscle and a part of the nodule appears cystic. A few small bud-like cysts somewhat resembling the dilated villi of the hydatidiform mole are present with this indurated red-brown nodule. The remaining portion of the endometrium ranges from 1 to 2 mm. in thickness. This microscopic study shows that the indurated area in the left cornu of the uterus consists of collections of placental villi, some of which are undergoing degenerative changes and necrosis, and groups of trophoblastic cells. In some locations the trophoblastic cells are proliferating and extending into the adjacent uterine smooth muscle. These trophoblastic cells appear fairly regular in size, and there does not appear to be any malignant transformation. An occasional placental villous is dilated and cystic and shows stroma with very few blood vessels. Some parts of this placental mass are completely necrotic and cellular structure is obliterated. This retained placental tissue which is extending into a uterine sinus shows trophoblastic proliferation and a few dilated villi. This is generally regarded to be a hydatidiform mole with trophoblastic proliferation, or sometimes called a chorio-adenoma destruens."

POSTOPERATIVE HISTORY

Patient was discharged from Mercy Hospital on December 15, 1950, in good condition. She was examined postoperatively on January 4, 1951, and again on January 24, 1951. She was instructed to return in about two months for another check-up and Friedman test. Patient returned for follow-up check on April 7, 1951. General condition was good. Vaginal examination showed a well-healed vault with no pelvic masses noted. Friedman was reported as negative. The same findings were noted four months later with continued negative Friedman.

Continued follow-up since then has failed to show any signs of recurrence, although patient was readmitted in January 1955, with a large cystic mass in the left adnexa. Laparotomy revealed enlarged cystic ovaries, more marked on the left, and bilateral oophorectomy was deemed advisable. Recovery was uneventful. Pathological report showed persistent follicle cysts of both ovaries.

Patient was last seen April 2, 1960. She is in excellent health, and has no evidence of any further trouble related to the previous findings. ★★★

The Street Clinic

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'EVERYTHING'S UP TO DATE . . .'

Michigan Governor G. Mennen (CIOpy) Williams just signed two measures of social and medical "importance" repealing laws dating back to the 1850's: Sheriffs are no longer required to jail fugitive slaves and Wolverine state physicians will no longer be paid 10 cents for each communicable disease they report.

Use of the Artificial Kidney for Renal Failure

WATTS R. WEBB, M.D. and CURTIS P. ARTZ, M.D.

Jackson, Mississippi

Like many other specialized techniques, hemodialysis has rather infrequent usage, but may be lifesaving on these occasions. The artificial kidney can filter from the dialyzed blood endogenous or exogenous toxic materials to maintain life until a reversible lesion can be corrected. As more experience has accumulated, the indications have broadened, and it appears that earlier and more frequent dialyses will result in improved results.

WITH ITS INCREASING USE in recent years, the technique of hemodialysis has been so refined that the artificial kidney may be applied without significant inherent morbidity. The beneficial effects of this lifesaving procedure have led to its widespread acceptance and utilization.

Although the mechanical techniques have been simplified, the care of a patient with renal failure requires extensive facilities. Chemical control of the blood electrolytes, pH, and clotting mechanism require specialized laboratory procedures. An experienced team of physicians and technicians must be available to adequately carry out the lengthy procedure of dialysis. As the need for dialysis in any one hospital is limited, hemodialysis will probably remain a specialized technique available only in larger medical centers.

While no complete agreement has been reached as to the precise indications for dialysis in any given patient, those with renal insufficiency should be transferred to the renal center as soon as the diagnosis is confirmed rather than after the need for dialysis is obvious, at which time the necessary delays may be fatal.

DIAGNOSIS

Oliguria has been arbitrarily defined as a urinary output of less than 500 cc. per day, while anuria is an output of less than 200 cc. In any patient other conditions such as blocked ureters, dehydration, shock or a plugged urethral catheter, must be excluded before renal damage can be assumed. This may require cystoscopy and retrograde catheterization or a rapid intravenous infusion, consisting of whatever fluid the patient needs most—glucose solution, saline, plasma or blood—as determined from the history and physical. If a liter of fluid is infused in 30 minutes, a normal kidney in the absence of continued massive bleeding, peritoneal or gastrointestinal losses, will respond with a markedly increased output. Frequent recording of the venous pressure will prevent the possibility of overloading with resultant pulmonary edema. Urinalysis will usually reveal albumin, red cells and casts, and a fixed specific gravity of 1.010 to 1.012, though the blood elements may be sufficient to elevate the specific gravity.

The most important use for dialysis is in acute renal insufficiency where the situation may be reversible (Table I). Occasionally, cases of chronic renal failure such as glomerulonephritis may be aided through a period of acute oliguria. Similarly, acute glomerulonephritis having a long period of oliguria may be aided by a dialysis or repeated dialyses, although the prognosis in such cases is poor. Dialysis has had a limited clinical trial in hepatic coma for the removal of ammonia and other less recognizable toxic substances; it has been found of value in some carefully selected cases. Its greatest success so far as percentage survival is concerned has been in the treatment of acute poisoning for removal of filtrable substances such as the barbiturates.[6]

There is no general agreement on indications for dialysis except "the uremic state." It must be appreciated, however, that the anuric patient is unpredictable, and the clinical state may deteriorate

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extremely rapidly. Frequently, a patient who appears perfectly normal in the morning may be in coma by afternoon. The comatose state is extremely ominous and means that dialysis has been delayed too long. In acute, uncomplicated renal failure the NPN will rise approximately 25 mg. per cent daily. Following traumatic injuries, however, with extensive muscle necrosis, sepsis and absorption from hematomas, the blood NPN may rise as much as 50 to 100 mg. per cent daily, with a proportionately rapid rise of potassium to cause cardiac intoxication. While potassium intoxication can be reduced and often prevented by the use of hypertonic glucose with insulin and calcium and bicarbonate injections, the most important medical measure has been the use of the cation exchange resins.[1] Each gram of resin given orally or preferably as an enema is able to remove approximately 1 mEq. of potassium. It is frequently necessary to give 150 to 200 gm. of the resin daily to keep the potassium down to physiologic levels.

TABLE I—USES

I. Acute Renal Insufficiency
  A. Postpartum, Shock, Trauma
  B. Transfusion Reaction
  C. Nephrotoxins
    Mercury, Bichloride or Cyanide
    Carbon tetrachloride, Sulfonamide
  D. Acute Glomerulonephritis—rarely
II. Chronic Renal Insufficiency—Palliative
III. Acute Poisoning
  Barbiturates, Salicylates, Bromides, Dilanten
  Doriden, Radioactive Strontium or Calcium
IV. Acute Hepatic Failure (?)
  NH_3 Intoxication

INDICATIONS

The chemical and clinical indications which are followed at present are summarized in Table II. Obviously not all cases of renal insufficiency require dialysis, and this tabulation constitutes an attempt to select those that will. Any of these indications may be modified by evaluation of the individual patient including the clinical course, general condition, and particularly the etiology of the renal shutdown and the degree of attendant sepsis and tissue destruction. Utilizing these criteria, it is true that a few patients will be dialyzed who might have recovered with continued conservative medical therapy. What is more important is that many patients can be saved who otherwise have been lost unnecessarily as judged by autopsy findings of potentially reversible renal damage.[5] One of the greatest difficulties noted by all observers has been the use of dialysis too late in the progress of the disease. Two patients referred to the University of Mississippi Teaching Hospital in the late stages actually died in the operating room during preparation for emergency dialysis, and both were found to have potentially reversible renal lesions at autopsy.

Bleeding either because of the uremic state or from frequently associated stress ulcers does not constitute an absolute contraindication, though of course it does make dialysis more hazardous. With careful management of the heparin therapy, however, dangerous bleeding can usually be avoided.

PRINCIPLES OF DIALYSIS

All artificial kidneys use the same principle: ions and molecules move back and forth across a semipermeable membrane immersed in an especially prepared electrolyte bath.[4] Currently, all types use cellophane as the semipermeable membrane and contain from 1 to 2 square meters of membrane surface. The pores in the membrane average 30 to 40 Angstrom units which is slightly less than the pores in the kidney tubules which average about 70 Angstroms. These allow rapid equilibration of water and small molecules such as sodium, potassium, chloride, and carbon dioxide with each solute moving toward the fluid in which its concentration is lower. Larger molecules such as urea, sulphates, phosphates, ammonia and creatinine equilibrate more slowly across the membrane while large molecules such as albumin, blood, viruses and bacteria are unable to cross the membrane. This latter property allows the external bathing solution to be composed of unsterile tap water. Thus, the artificial kidney acts as an automatic computer to evaluate and correct the chemistries within the blood to that of the electrolyte solution outside the membrane tubing.

TABLE II—INDICATIONS

I. Electrolyte Abnormalities
  A. CO_2 less than 12 mEq. per liter
  B. 1. K^+ greater than 7 mEq. per liter despite resins
    2. EKG changes of potassium intoxication
II. NPN greater than 125 to 175 mg. per cent
III. Clinical Uremia
IV. Sixth day of anuria
V. Repeat dialysis on any of above

The model in current use at the University of Mississippi Teaching Hospital is a MacNeill-Col-

lins Dialyzer[3] which has 1 square meter of cellophane surface composed of 26 parallel tubes approximately 22 inches long through which the blood can pass. Each of these tubes is bathed on the outside by an electrolyte bath which is pumped around and between the flattened cellophane tubings. This particular unit has the advantages of minimal size and a small extracorporeal volume of blood of approximately 200 cc. Thus, a total dialysis can be accomplished utilizing only one blood transfusion. The patient's blood is exteriorized for a minimal period of time and only small volumes of electrolyte bath need be utilized. The unit is totally autoclavable and can be used without a blood pump, if required, by utilizing only arterial pressure.

TECHNIQUE OF DIALYSIS

Dialysis is performed in the operating room so that adequate and skilled anesthetic and nursing assistance is available during the procedure. Cannulation is accomplished by passing a double-lumen catheter through the saphenous vein at the groin into the inferior vena cava. The shorter arm of the catheter usually rests in the iliac vein to withdraw blood while the longer arm rests well up in the inferior vena cava to return the dialyzed blood. Just prior to cannulation, 1 mg. of heparin per kilogram of blood weight is injected intravenously and throughout the procedure the clotting time is maintained between 30 and 50 minutes. The dialyzer, which has been prepared previously and autoclaved along with its connecting tubing, is attached to the cannulas, and blood flow is

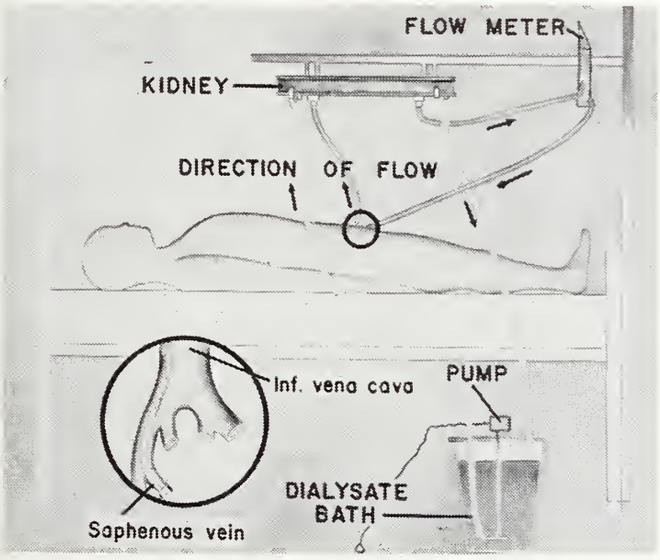

Figure 1. Diagram of dialyzer as attached to patient. Not included is the blood pump which is necessary for a vein-to-vein circuit though not for artery-to-vein flow.

started to the unit. Blood flow is maintained at approximately 200 cc. per minute against a bath flow of over 1 liter per minute.

The electrolyte bath contains 20 liters of tap water, with 125 gm. NaCl, 4 gm. KCl, 4 gm. $MgCl_2$, 15 gm. $CaCl_2$, 55 gm. $NaHCO_3$ and 20 gm. glucose. This gives an electrolyte composition of Na 139.6 mEq., K 2.7 mEq., Mg 1.0 mEq.,

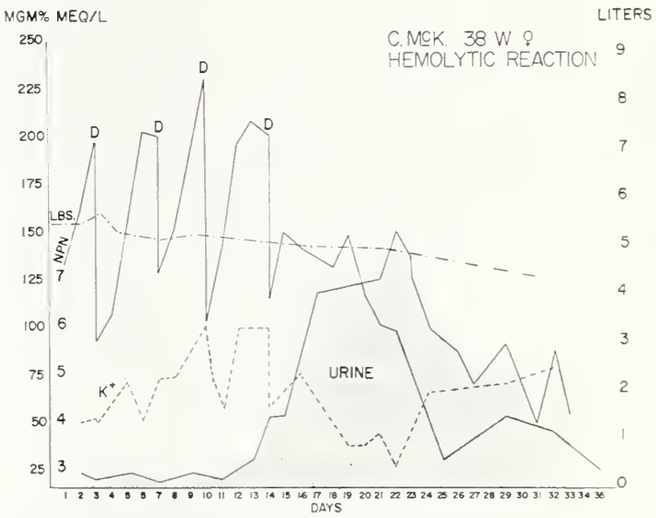

Figure 2. Chart outlining hospital course. D = dialysis. Weight in pounds is indicated by the mg. per cent scale used for the NPN.

Ca 5.0 mEq., $NaHCO_3$ 32.8 mEq., Cl 121.7 mEq. and 100 mg. per cent glucose. The pH is adjusted to 7.4 by the addition of lactic acid. If it is desirable to remove further water from the patient, the glucose may be increased to 100 gm. per bath, or 500 mg. per cent. Potassium may be omitted altogether if the patient has a particularly high serum level of potassium.

The bath solution is changed every 45 minutes, at which time the NPN concentration has risen to between 20 and 30 mg. per cent, and the ionic equilibration between the bath and the blood has become almost complete. During an eight hour run, the blood NPN will be dropped 50 per cent or more, and about 50 per cent of the waste sulphates and some 30 per cent of the phosphates will be removed from the patient.

RESULTS

Clinical improvement of the patient even during dialysis may be dramatic. In the patient who is comatose with hypotension and areflexia, the reflexes may be restored, the blood pressure elevated, and the patient may become alert and oriented for the first time in days. A drowsy, disoriented patient may become able to perform complicated mathematical procedures after the dialy-

sis. Nausea and vomiting are usually controlled, and the patient may become hungry. While a survival rate of 83 per cent has been reported in patients with dialyzable poisons,[6] in nephrotoxic injury the survival rate is approximately 50 per cent. In acute tubular necrosis only about one-third can be saved.[2, 7] Formerly, results in oliguria after massive trauma and sepsis were extremely poor. Recently, a bright note was introduced by the work of Teschan who has reported the survival of nine out of ten patients who were treated by daily dialyses. These patients were allowed to eat a regular diet and remained clinically well without any of the usual signs of uremia. They did not demonstrate delayed wound healing, emaciation, anemia, and susceptibility to infection as usually noted. While it is not possible in most centers to accomplish daily dialysis, dialysis can be performed two or three times each week with a much improved clinical course and prognosis.

CASE REPORT

A 38-year-old white woman was admitted to University of Mississippi Teaching Hospital on May 22, 1959, having had a hysterectomy May 18 with a hemolytic transfusion reaction. Initially, the urinary output had been satisfactory, but by the morning of May 19, it was noted to be diminished and each day subsequently was less than 150 cc. The NPN on May 20 was 68 mg. per cent.

Physical examination: Blood pressure, 104/80; pulse, 92; respirations, 20; temperature, 99° F. The patient was a well-developed, well-nourished, but acutely ill woman who was pale and lethargic. The mucosae were pale. The heart and lungs were clear. The abdominal examination was normal except for a lower abdominal incision, and there was two plus pitting edema of the ankles.

Laboratory data on admission revealed an hematocrit of 22, hemoglobin of 7.6 gm. per cent, NPN 132 mg. per cent, chlorides 88 mEq., CO_2 18 mEq., potassium 4.1 mEq., sodium 125 mEq. The urinalysis revealed 2 plus albuminuria, 160 white blood cells per HPF, and innumerable red cells. The urinary output during the first 24 hours was only 34 cc. and only 50 cc. during the second day. The total intake of fluids was restricted to 600 cc. of 30 per cent glucose per 24 hours with calcium gluconate and vitamins. Butter and sugar balls were offered orally but were taken poorly. On May 23, the NPN was 165 mg. per cent, and by the following morning it was 200 mg. per cent, with a CO_2 of 9 mEq. and chloride of 76 mEq.

The initial dialysis was performed that afternoon which reduced the NPN to 111 mg. per cent, and raised the CO_2 to 22 mEq., chloride to 97, and sodium to 133. The patient remained anemic and required several transfusions during her hospital course. Three subsequent dialyses were performed on May 28, 31, and June 4.

The diuretic phase actually started during the fourth dialysis which was on the 13th day of her anuria. She was then maintained on a modified rice diet with large amounts of fluid and electrolytes to maintain normal blood electrolyte concentrations.

On June 9, the patient developed thrombophlebitis of the right arm with a staphylococcal septicemia which responded to antibiotics. The remainder of the clinical course was uneventful with the patient continuing to improve both clinically and chemically. The electrolytes returned to normal with the NPN being down to 28 mg. per cent by June 26, and all other chemistries equally normal. The PSP excretion on June 26 showed 23 per cent excretion in 15 minutes and a total of 43 per cent in one hour, which is at the lower limits of normal.

The patient has been seen subsequently on several occasions and is doing extremely well. On the last visit on January 26, 1960, the urinalysis was completely normal and the NPN and creatinine were within normal limits. She has no GU symptoms, and is working full time.

SUMMARY

1. The principles and techniques of hemodialysis have been briefly presented along with the current concepts of indications for its use.

2. While dialysis rarely can benefit the chronic case, it frequently can be lifesaving in the acute, potentially reversible situation, and probably should be used earlier and more frequently for maximum benefit. ★★★

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Cardiac Emergencies During Anesthesia

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Sometimes it appears that cardiac complications during anesthesia are more common now than in the past. While this is due primarily to the increased number of operations, better diagnoses, and more complicated techniques, the occurrence of these emergencies is such that every physician should be aware of their nature. Etiology, causes, and treatment are discussed.

EVERY PHYSICIAN, regardless of his particular specialty, is at some time concerned with the surgical patient. For this reason, each should have a practical awareness of the cardiac complications that may occur in the operating room during the time that the patient is anesthetized and undergoing surgery.

Cardiac complications sometimes appear to be more common now than in the past. Actually, this impression is more apparent than real. Many patients that are operated on today would not have been considered for surgery in the past. In addition, cardiac complications are now labeled as such, where once they were called coronary accidents, embolic accidents, pleural shock or were dismissed as a result of idiopathic causes. It must also be considered that a greater number of operations are presently being performed, and accidents due to misfortune, lack of vigilance, human frailty or unpredictable factors will occur statistically more frequently.

INCREASE IN KNOWLEDGE

In the past 20 years, the increase in the knowledge of the science and art of anesthesia with the accompanying diversity of methods, apparatus, preparations, and drugs, has provided a greatly increased scope for the occurrence of accidents. The overindulgence in "poly pharmacy" and the alarming and unexpected results following the use of some of the newer and untried relaxants may set up a series of circumstances that will precipitate a harmful physiologic response. Most accidents occur early in the anesthetic, usually in the induction period when the patient is first exposed to the risk of the anesthesiologist's potentially lethal armamentarium. The emergencies that occur later in the anesthetic can be attributed to the promiscuous use of the so-called adjunctive drugs, overdosage of the anesthetic agent, and the harmful effects of too much surgery.

It has been proven that all agents used in anesthesia may have a harmful effect on the heart. The cardiac complications that are most frequently encountered during anesthesia may be divided into three groups: 1. disturbances in rhythm, 2. acute cardiac failure, and 3. cardiac arrest.

DISTURBANCES IN RHYTHM

This type of abnormality occurs in 50 to 85 per cent of all patients receiving an anesthetic. The figure varies from author to author. Four years ago, when a cardioscope was obtained at a Jackson hospital, experience with 175 consecutive unselected cases demonstrated a disturbance in rhythm in 143 patients or approximately 82 per cent. Most of these abnormalities were very transient and harmless as far as altering cardiac function, but nevertheless, the percentage demonstrates that cardiac irritability increases during anesthesia. Most of these arrhythmias consisted of sinus tachycardias, A V nodal rhythm, and partial A V block. As long as they exhibited a transient characteristic, nothing definitive was done to eliminate them. If they became persistent and particularly if cardiac function was impaired as reflected in the blood pressure and respiration, measures were taken to restore the rhythm to normal.

Arrhythmias during anesthesia can be expected to develop more commonly at certain times than at others. An awareness of these danger periods on the part of the anesthesiologist and the surgeon allows a better chance of controlling the complications. Arrhythmias usually appear during the induction of the anesthetic, particularly in the sec-

ond stage or the excitement period when most of the reflexes are hyperactive. They also occur during the period that an endotracheal catheter is passed. This procedure can be dangerous if attempted at the wrong time or in a clumsy manner. Arrhythmias frequently occur when traction is exerted in the cervical region. From these characteristics, it is possible to deduce that arrhythmias that occur during anesthesia are due to overactivity of the autonomic nervous system. They are not usually related to any toxic effect of the anesthetic on the myocardium.

ACUTE CARDIAC FAILURE

The entity of cardiac decompensation often occurs during anesthesia particularly under these circumstances:

1. Improper position. This is obviously of greater importance in the dyspneic patient. Anesthesia does not remove the cause for dyspnea—only the complaint. Many procedures can be done with greater ease and convenience to the surgeon with the patient in various degrees of Trendelenburg. In the dyspneic and the obese patient, pulmonary congestion and edema can develop rapidly in this position. Some procedures are made technically easier by placing the patient in a more vertical position. In a lengthy operation where massive doses of anesthetics are used and possibly a large amount of blood is lost, the peripheral circulatory resistance disappears producing a chain of events which lead directly to acute cardiac failure.

2. The misuse of positive pressure breathing. The improper application of positive pressure can rapidly alter the venous return to the heart with a resulting peripheral venous engorgement. This can lead to signs of cardiac decompensation which can greatly impair the circulatory adequacy of the patient.

3. Peripheral vasodilatation. This occurs with all anesthetic agents. The capillaries are dilated, particularly those of the skin with development of a peripheral venous well.

4. Resistance to respiration. Any obstruction to respiration will gradually increase venous congestion in the lungs that will be translated into pulmonary edema.

5. Overadministration of fluids. Altshule has recently shown that fluids can be administered in greater amounts and more rapidly than was once thought. In the normal patient, fluids can be given at a rate between 10-20 cc. per minute and this can be continued for four or five hours with no harmful effects. In the poor risk patient, in the patient who has had a chronically low blood volume, and in the elderly patient, fluids must be given with much more discretion. It must be remembered that heart failure may not be manifested until several hours after surgery, although the vascular system may have been taxed beyond its limit by excessive fluids during the procedure.

CARDIAC ARREST

The most important thing to remember about cardiac arrest is that hearts do not stop beating suddenly or spontaneously. The term itself implies this, but the condition occurs gradually and is often preceded by overactivity of the heart followed by a determinate course of degeneration leading to this acute emergency. If the subject is approached in this manner, most of the mystery and uncertainty surrounding the accident will disappear. If each abnormal event in the cardiac cycle and in the dynamics of the cardiovascular system is regarded as a potential antecedent leading to ultimate cardiac arrest, this catastrophe can be avoided.

When cardiac arrest occurs, speed should be uppermost in everybody's mind—the anesthesiologist, the surgeon, the assistants, the scrub nurses, and the circulating nurse. There is no other situation in medicine that requires the teamwork and cooperation necessary in cardiac arrest. If there is more than three minutes delay in restoring a functional cardiac beat, the salvage rate drops precipitously. Out of approximately 6,500 cases, this author has been involved in seven cases in which cardiac arrest occurred. Four were the direct result of anesthesia, and three were the result of surgery. Out of these seven cases, four are living and three died for a survival rate approaching 60 per cent.

TWO PRIMARY FACTORS

The two most important primary factors producing cardiac arrest seem to be: 1. anoxia, and 2. vagal stimulation, particularly in the presence of inadequate carbon dioxide elimination.

Anoxia is, of course, a subject all its own. In this regard, it should be emphasized that excessive speed in producing the state of anesthesia has no place in a well-managed anesthetic. The rapid onset of anesthesia implies the administration of excessive doses of depressant drugs which cause a dangerous and sudden alteration of the physiology of the cardiorespiratory system. An ultimate cardiac arrest frequently has its beginning at the onset of anesthesia, and even though

the actual incident does not take place until later, the origin can be traced to what was done at the start of the anesthesia. The heart muscle is equally as vulnerable to anoxia as the brain. It has no oxygen reserve and stands insult poorly.

TREATMENT

1. Arrhythmias. The treatment of the lesser arrhythmias does not necessitate the utilization of any drugs. Discontinuing the anesthesia and promoting the elimination of the agent is usually all that is necessary. If the arrhythmia persists, and if the patient begins to respond to the arrhythmia in a manner that suggests a diminished cardiac function, then more definite measures must be taken. Atropine and quinidine are the two most valuable drugs in arrhythmias of a serious nature. These drugs used intravenously in the proper and adequate doses can restore the normal rhythm more satisfactorily than any other drugs.

Generally speaking, the supraventricular arrhythmias, or the ones that are auricular in origin are due to reflexes initiated in the autonomic nervous system. Such arrhythmias are usually less significant and are more transient than the ones with ventricular origins. One seldom has to do more than deepen or lighten the plane of anesthesia to correct these arrhythmias.

The ventricular irregularities, however, are much more serious and if not corrected, will usually lead to ventricular fibrillation. Even the innocent premature ventricular contraction, if it starts to occur with greater frequency, must be corrected. In dealing with ventricular fibrillation, which for all practical purposes is the same as cardiac standstill, it is imperative that the diagnosis be definitely established so that drugs that will worsen the condition, such as epinephrine, will be avoided.

When ventricular fibrillation occurs, the heart should be immediately subjected to electric stimulation. For this purpose an electric defibrillator should be used. Every modern operating room should have one readily accessible. Even though the instrument is not used frequently, when the situation arises, it is invaluable. The electric defibrillator has become essential in the treatment of this condition. Proof that a hospital did not have one available may be used in court to strengthen a neglect case.

After the heart has been electrically stimulated, the fibrillation will then be converted to a standstill. At this time, the heart must be massaged. The rate of massage is a controversial issue—some say that the normal rate should be simulated while others insist that a rate of 20 to 60 times a minute is adequate. If the massage is initiated within three minutes, the first several manually-produced contractions will start the heart beating on its own. If the delay has been longer than three minutes, then massage must be continued at a rate somewhere between 50 and 80 contractions per minute. Whatever the rate, the massage must be adequate, e.g. each contraction must produce a carotid pulsation.

2. Acute cardiac failure. This condition develops more frequently in operations that are prolonged, in which there has been a large quantity of anesthetic drug administered, large volumes of fluids given, and an excess of blood lost. In 1,000 cases of heart failure reported by White in 1940, five-tenths per cent were caused by surgical operations. The type of heart failure encountered when the patient is receiving anesthesia in somewhat different from the usual case of chronic congestive failure. This type of failure is the acute failure, which in one sense of the word is heart failure in its purest form. It is heart failure that involves only the heart and lungs. The problem in chronic congestive failure is more of a systemic problem, e.g. the kidneys, liver, and the interstitial compartments are involved.

Once the mechanism that will eventually produce acute heart failure is set in motion, whether it is caused by too much fluid, persistent auricular tachycardia, or another type of arrhythmia, an overdose of anesthetic agent, or a previously established diagnosis of heart disease leaving the heart with a low reserve, steps must be taken immediately to prevent the ultimate outcome of a failing heart.

The standard cardiac drugs used in fortifying the heart and restoring its function are well-known; however other important factors are less recognized. It has already been pointed out that the anesthetized patient cannot complain of dyspnea. However, the cause for dyspnea may still be present. In the recumbent position 25 per cent more blood circulates through the heart than in the upright position. The lungs are also more engorged in the recumbent position. Considering these circumstances, it would be of benefit to place the patient in a position with the upper part of the body elevated. This one maneuver will frequently alter the course of impending heart failure. Furthermore, the gravity effect will also make more room for breathing by relieving the pressure of the diaphragm and the abdominal viscera on the lungs.

As the patient remains under the influence of anesthesia, the respiratory center in the brain may become depressed. The chemophysiologic effects

on the circulation, respiration, and cardiac function produced by depression of the respiratory and vascular centers in the brain are established facts. Pulmonary edema has been produced in animals by causing a depression of these higher centers. The agents used in anesthesia, by their particular pharmacological action on the central nervous system, can depress these higher centers in man to produce pulmonary edema.

Besides the usual drugs used in acute cardiac failure, there are several other things which can be done to relieve the situation. Positive pressure applied properly can temporarily relieve acute pulmonary edema. However, this should be regarded only as a temporary measure because this is purely symptomatic therapy.

Venesection has become almost a historical method of therapy. However, in the presence of an increased venous pressure manifested by distended veins, this can be a useful procedure. By withdrawing even small amounts of blood, the heart can be relieved of an overloaded situation.

3. Cardiac arrest. The treatment of this condition has been discussed in the section on ventricular fibrillation. The use of potassium, calcium, and barium either by topical application to the surface of the heart, injection into the myocardium, or by any other method has been purposely avoided. In the opinion of this author the use of these drugs is extremely hazardous, and too frequently, if the wrong choice is made, any possibility for salvage can be lost.

SUMMARY

The causes of cardiac emergencies arising during anesthesia have been presented. An enumeration of the types of cardiac emergencies during anesthesia has been given. Treatment has been discussed. ★★★

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PICKLED PROLETARIAT

Alcoholism is such a problem in Russia's communist utopia that tighter controls and steeper prices have been slapped on Ivan's vodka supplies. Despite the medical problem, Radio Moscow has an explanation, a psychiatric classic: "In capitalist countries," a broadcaster calmly asserted, "men drink from despair in order to forget how they are exploited, their bad working conditions, and the specter of unemployment. But the alcoholism of the Soviet citizen has other causes. It comes essentially from the overflowing joy of living and from his tendency to celebrate with spirit the great achievements of socialism."

Syphilis in Mississippi

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Since the first state effort to combat syphilis in 1918, the V.D. rate in Mississippi has decreased considerably. Presently, however, syphilis is on the rise in the state and the nation. One alarming development is the increased incidence in lower age groups. The history of state V.D. control is presented, and tables of venereal disease incidence and rate in Mississippi are given.

THIS PAPER REVIEWS syphilis control in Mississippi with emphasis on the past twelve years.

The first state attempt to control venereal disease was in 1918 when the Board of Health was given the power to regulate and suppress V.D. The legislature in 1920 made a $40,000 appropriation for venereal disease control, the first such appropriation. In 1922 this was cut 20 per cent and federal grants were reduced making funds inadequate for operation of venereal disease clinics. For 15 years little effort was made at V.D. control in the state.

In July 1936, the most important date in U. S. syphilis control history, Dr. Thomas Parran, U. S. surgeon general, challenged the nation to take up arms against V.D. in an article, "The Next Plague to Go," in *Survey Graphic*. That same year Dr. Parran's statement was reprinted in the *Reader's Digest*.

By 1938 the nationwide program was well underway. Financial support came from federal, state, and local governments. The Mississippi legislature made its second earmarked appropriation for syphilis eradication in 1938. The national defense program contributed to V.D. control through the State Selective Service program.

Early in 1942, numerous clinics were set up in Mississippi for treating registrants rejected because of venereal disease. In this same year, the first venereal disease investigators were employed. The state legislature of 1942 made funds available for isolation facilities at McLain and in Matty Hersee Hospital in Meridian. Federal funds were allocated to the state to operate these centers as well as others at Greenwood, Brookhaven, and Key Field in Meridian.

The band of venereal disease investigators enlarged. These workers follow up V.D. cases to find other victims and carriers. Before the V.D. investigators, public health nurses carried on this job along with their other duties.

In 1944 penicillin became available for use in the treatment centers. County health departments ceased to treat syphilis and sent the patients to the V.D. centers instead.

Searching for a new technique in case-finding, special projects were carried out in Leflore and Quitman counties in 1947. One was based on thorough contact tracing and the other on mass bloodtesting. This led the way to the mass survey approach which utilized both methods. Using this approach, each county in Mississippi was surveyed for syphilis one or more times. Teams of men and women were trained to assist the county health departments in the surveys.

The procedure was as follows: A team representative would enter a county and make preparations. The program was advertised by radio, newspapers, posters, pamphlets, and thousands of letters to landowners. The representative obtained the aid of county agents, teachers, ministers, civic clubs members, public officials, plant managers, and others. Educational programs were conducted at theaters, schools, and churches. Bloodtesting clinics were held at crossroad stores, street corners, schools, industries, churches and plantations.

All persons found to have a positive or doubtful test were notified by letter or personal contact

Read before the 73rd Semi-annual Meeting, Delta Medical Society, Cleveland, April 13, 1960.

and were advised to see their family physician or go to a Rapid Treatment Center. At the centers, the patients were examined, diagnosed, interviewed for contacts, given educational programs and treated. Names of contacts were later traced by the local health departments.

TABLE I

MISSISSIPPI

CASES OF SYPHILIS REPORTED TO THE PUBLIC HEALTH SERVICE

(Known Military Cases Excluded)

Fiscal Years 1941-1947

Fiscal Year	*Primary & Secondary*	*Early Latent*	*Late & Late Latent*	*Congenital*	*Totals*
1941	6,588	11,926	13,868	1,837	34,219
1942	10,549	13,859	14,528	1,754	40,690
1943	9,691	12,715	14,085	1,511	38,002
1944	8,769	7,380	8,566	1,248	25,863
1945	7,208	6,830	6,401	1,049	21,488
1946	8,323	7,628	6,435	1,030	23,414
1947	7,207	5,424	4,386	929	17,946

Source: V.D. Statistical Letter (Supplement)
July, 1956
U. S. Dept. of Health, Education, and Welfare

In 1950 an additional approach was instituted to obtain bloodtests on those persons who failed to respond to the mass survey. This was a "house to house" program which immediately followed the mass survey. House to house testing eventually took the place of scheduled testing stations. As time went on and funds were reduced, random testing of small children and older persons in which a profitable yield of cases could not be obtained was reduced to a minimum.

The follow-up investigations remained essentially the same until 1957 when the "cluster testing" method was introduced. This new technique is an extension of the standard contact interviewing process. Patients with infectious syphilis are interviewed for sex contacts and are also asked to name others of either sex who move in the same socio-sexual environment. In addition, associates, contacts, and suspects are bloodtested. Associates include neighbors, fellow workers, and others who have not been specifically named as contacts or suspects.

The role which private Mississippi physicians have played and continue to play in the campaign against syphilis is an important one. It is impossible to enumerate the various measures taken by this group as each physician has his own policies. Much of the syphilis has been treated and much prevented by private physicians. The faithful reporting of cases by some of them has been the basis of the discovery of many other cases, thus preventing further spread.

The accompanying charts reflect the trend of syphilis in the state during the past twelve years. The trend downward has been gratifying. However, there is a slight rise in the total syphilis incidence in recent years.

TABLE II

CASES OF SYPHILIS REPORTED TO THE PUBLIC HEALTH SERVICE

(Known Military Cases Excluded)

Fiscal Years 1948-1959

	MISSISSIPPI					CONTINENTAL UNITED STATES				
Fiscal Year	*Primary & Secondary*	*Early Latent*	*Late & Late Latent*	*Congenital*	*Totals*	*Primary & Secondary*	*Early Latent*	*Late & Late Latent*	*Congenital*	*Totals**
1948	3,065	3,593	2,618	721	9,997	80,528	97,745	123,972	13,309	338,141
1949	2,228	3,423	6,263	941	12,855	54,248	84,331	121,931	14,295	288,736
1950	1,168	2,743	6,053	1,481	11,445	32,148	64,786	112,424	13,446	229,723
1951	682	1,631	4,812	1,406	8,531	18,211	52,309	107,133	12,836	198,640
1952	367	947	2,857	646	4,817	11,991	38,365	101,921	9,239	168,734
1953	165	490	2,494	421	3,570	9,551	32,287	100,195	8,021	156,099
1954	170	397	1,436	432	2,435	7,688	24,999	93,601	7,234	137,876
1955	181	236	758	158	1,333	6,516	21,553	84,741	5,515	122,075
1956	89	158	884	96	1,227	6,757	20,014	89,851	5,535	126,219
1957	66	140	1,051	94	1,351	6,283	20,346	100,514	5,452	135,542
1958	69	111	631	65	876	6,685	19,309	92,781	4,839	126,072
1959	76	103	441	86	706	8,178	17,592	86,776	5,215	119,981

* Includes cases not classified by stage.

Source: V.D. Statistical Letter, 1948-1959
U. S. Dept. of Health, Education, and Welfare

Chart I shows syphilis cases reported from 1941 through 1947. Of the 75,000 cases of primary and secondary syphilis reported in the continental United States in 1942, over 10,000, or 14 per cent, were reported from Mississippi, which contained only a small segment of the national population. In 1957, however, only 1 per cent of the nation's infectious syphilis was reported from this state.

CHART I

Chart I also shows that the incidence of congenital syphilis was declining prior to 1948. In that year an increase was noted. A special study revealed that this rise was due primarily to the failure of private physicians to obtain serologies on their prenatal patients. Congenital syphilis again took a downward course after 1951 and has continued downward, but cases still occur. There were 84 cases reported in Mississippi in the fiscal year 1959.

The increase in the number of cases reported in 1942 reflects increased control efforts rather than a rise in the true incidence of V.D. After 1943 the trend of syphilis reported was again downward, as a direct result of the increased effort to find and treat the disease. Primary, secondary, and early latent syphilis took a sharper drop in 1948, however, upon initiation of the mass survey program. This extensive educational program prompted persons with suspicious lesions to seek medical care. (See Chart II.) The marked increase in the cases of late and late latent syphilis reported in 1949 was probably due to the mass survey testing of persons of all ages in contrast to the limited testing of contacts. This mass survey reached its peak of activities in 1950. The figures from that year until the present time reflect the trend in the actual incidence of V.D.

Chart III presents veneral disease morbidity data for the past few years by sex and race. In general, there is a higher incidence of V.D. among the non-white.

Chart IV shows Mississippi's role in the national V.D. problem. In 1949 the rate of syphilis in Mississippi was three times that of the nation. Since 1955, however, the state rate has been less than the national rate.

INCREASE IN SYPHILIS

Infectious syphilis is presently increasing in Mississippi and in the nation. Statistics show persons are contracting V.D. at a lower age. At the present time approximately 52 per cent of the primary and secondary syphilis is being found in the 15 to 24 year group. A patient seen in our clinic two weeks ago with a primary lesion revealed nine sexual contacts, three of whom were below 15 years of age.

Several steps can be taken to combat V.D. in Mississippi: (1) New methods of investigation

TABLE III

VENEREAL DISEASES REPORTED TO THE MISSISSIPPI STATE BOARD OF HEALTH

By Sex and Race
1948-1957

Calendar Years	*1948*	*1949*	*1950*	*1951*	*1952*	*1953*	*1954*	*1955*	*1956*	*1957*
SYPHILIS										
White Male	286	192	190	130	93	72	66	47	47	63
White Female	206	178	116	58	55	48	36	32	35	63
Non-white Male	4,478	5,305	5,026	2,993	1,916	1,155	977	484	543	443
Non-white Female	5,974	6,230	6,019	3,103	2,264	1,415	1,107	538	683	569
Total	10,944	11,905	11,351	6,284	4,328	2,690	2,186	1,101	1,308	1,138
GONORRHEA										
White Male	598	509	513	370	320	288	342	350	246	237
White Female	360	296	307	315	245	216	239	171	154	150
Non-white Male	6,895	7,340	8,510	6,322	5,564	4,894	5,560	5,556	4,877	4,420
Non-white Female	2,922	2,867	3,444	3,280	3,097	2,778	3,033	2,866	2,512	2,456
Total	10,775	11,012	12,774	10,287	9,226	8,176	9,174	8,943	7,789	7,263
OTHER V.D.										
White Male	23	28	10	13	17	9	7	13	13	5
White Female	4	2	2	0	1	0	0	4	1	0
Non-white Male	423	484	335	190	169	103	154	109	125	83
Non-white Female	115	157	75	46	53	35	39	41	38	31
Total	565	671	422	249	240	147	200	167	177	119

Source: Files of the Mississippi State Board of Health, Div. of Preventable Disease Control.

and of preventing syphilis in children must be found. (2) The private physician must report all V.D. cases to the local health officer. (3) The public must be advised that reporting is not only the doctor's duty—it is state law. (4) Educational programs for teen-agers must be established in the schools. (5) Finally, funds and facilities must be made available to better train venereal disease investigators. ★★★

TABLE IV
RATE OF SYPHILIS REPORTED TO THE PUBLIC HEALTH SERVICE
(Known Military Cases Excluded)
Rates per 100,000 population

MISSISSIPPI

Fiscal Year	*Primary & Secondary*	*Early Latent*	*Late & Late Latent*	*Congenital*	*Totals*
1948	148.35	173.91	126.71	34.89	483.88
1949	108.84	167.22	305.95	45.96	629.45
1950	56.50	132.70	292.83	71.64	553.70
1951	31.61	75.61	223.08	65.18	395.50
1952	16.96	43.78	132.08	29.86	222.59
1953	7.72	22.94	116.76	19.70	167.13
1954	7.98	18.65	67.48	20.30	114.42
1955	8.30	10.82	34.77	7.24	61.14
1956	4.26	7.57	42.39	4.60	58.84
1957	3.14	6.65	49.95	4.47	64.21

CONTINENTAL UNITED STATES

Fiscal Year	*Primary & Secondary*	*Early Latent*	*Late & Late Latent*	*Congenital*	*Totals*
1948	55.89	67.85	86.05	9.23	234.72
1949	37.14	57.63	83.32	9.76	197.31
1950	21.57	43.48	75.45	9.02	154.18
1951	12.08	34.71	71.09	8.51	131.82
1952	7.87	25.19	66.92	6.06	110.79
1953	6.16	20.84	64.69	5.17	100.78
1954	4.87	15.85	59.37	4.58	87.45
1955	4.05	13.40	52.72	3.43	75.95
1956	4.16	12.34	55.43	3.41	77.87
1957	3.77	12.19	60.24	3.27	81.24

Source: V.D. Stat. Ltrs. 1948-1957, U. S. Dept. H.E.W.

204 Baker Boulevard

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SPACE ACCELERATION SOLUTION?

Two Ohio pathologists suggest that immersion may be the answer to helping man withstand sudden space vehicle acceleration necessary to break gravity. Observing that ". . . the ideal space capsule is the amniotic sac and its fluid," they put laboratory mice in a state of hypothermia, immersed them in brine solution in plastic bags, and spun their subjects in a centrifuge without harm. The same stresses quickly killed unimmersed mice.

—*AMA Archives of Pathology,* May 1960

Case Report of a Vulva Lesion Of Undetermined Etiology

ROBERT E. BLEDSOE, M.D.
Greenville, Mississippi

A case report is presented of a 24-year-old white, married female with a recurrent undiagnosed ulcerative lesion of her vulva and ulcerative lesions of her gingiva of 10 years duration. Past history, laboratory data, and physical examination are discussed, and diagnosis is considered.

THE PATIENT, a 24-year-old white, married female, was first seen by me July 11, 1958. The patient said her present illness began at 14 years of age when menarche started. After one or two periods she noticed a sore on the outer edge of her vagina. This sore progressed until it became about the size of a 50 cent piece. It was treated with hot Sitz baths, silver nitrate, a number of salves and ointments, and all known compresses and poultices.

The only known associated or complicated illnesses were repeated sore throats and canker sores on her gums and tongue. These cold or canker sores never seemed to appear at the same time as the lesions on her vulva, but she stated that she seemed to have sores in her mouth or on her "vagina" at all times. She recalled that she had missed several periods after the onset of menstruation and was given hormone tablets and shots in an effort to establish monthly periods. At 15 years of age, because of the above lesions, she was admitted as a charity patient to the general surgery service at the Baptist Hospital, Memphis, Tennessee. During her four weeks' stay there she was seen by a number of specialists. A biopsy was taken at this time and skin tests, injections, and local treatments were given. She recalled being given applications of a purple medicine, no doubt Potassium Permanganate. The lesion healed while the patient was hospitalized for the first time since its onset.

Since that time the patient has noticed recurrent ulcerated lesions of her vulva, mostly involving the posterior fourchette and the lateral edges of the labia majora. She was seen by all the local doctors in her community for this complaint and was referred to a dermatologist in Jackson. The patient, at about 17 or 18 years of age, was presented before a dermatological society meeting in Jackson.

Several years later the patient moved to Jackson and started to work. Her doctor in Jackson later related to me by phone that he attempted to regulate her menses with hormones, and the lesion seemed to improve during her menstrual periods.

Two years ago she had a remission for seven months while keeping her periods regular with hormones. During this remission she was married. Her periods were controlled with hormones for the first three or four months of her marriage, and it seemed apparent that as long as she menstruated regularly the lesions would remain healed. She became pregnant during the fifth month of marriage. After about two months of amennorrhea, the ulcer recurred on her vulva. Hormones and other medications were given, but the lesion continued to grow until her entire fourchette was an ulcerated, necrotic appearing sore, involving both of her Bartholin gland areas. The condition was of such severity that her pregnancy was terminated by a cesarean section on December 20, 1957.

During this hospital stay the lesion was again biopsied and was reported to be a non-specific granulomatous inflammation. During the period that lochia drained over her perineum, the lesion healed quite promptly. The patient stated that she made a mistake by trying to nurse the baby. She failed to menstruate at that time, and the lesion recurred about three weeks post partum. She had had an ulcer continuously since that time in spite of cyclic hormone therapy each month.

When the patient was first seen in my office, there was a 3½ x 3 cm. punched out, ulcerative

lesion on the right side of the fourchette, not undermined, with edema and erythema. The crater's base was smooth and covered with a greenish-yellow exudate. Figures 1 and 2 were taken at this time. Her referring physician had requested that she be given 50 mg. of Progesterone. Her

Figure 1. Punched out, ulcerative lesion of the vulva, area approximately 3½ by 3 cm.

menstrual period began July 16, 1958. She was next seen July 19 and most of the induration and edema had disappeared. The exudate was gone, and the lesion was perfectly clean and even smaller in size. We planned to make photographs on the next follow-up visit, but when she came in July 25, the greenish exudate was present, and the lesion was larger.

INITIAL IMPRESSION

My initial impression was chronic recurrent herpes progenitalia. Because she had never received repeated smallpox vaccinations, these were started by the interdermal pin-prick method. The first one took, forming a typical pox with thickened eschar. This was repeated at weekly intervals. After four such injections, with no improvement noted, she was given an intradermal injection of the diluted vaccine. She was tried on Varidase Buccal tablets and steroid therapy—Meticorten and Cosa-Tetracyn. In spite of this treatment, plus regular menstrual periods and daily Sitz baths, she continued to have more secondary cellulitis. Because of this she was admitted to the hospital on September 7, 1958, for a more extensive work-up.

Her past history revealed that her general health had been good with the exception of the recurrent lesions in her mouth and on her vulva. She had had the usual childhood diseases and the routine preschool immunizations, including a successful smallpox vaccination. She had had a T&A as a child because of chronic recurrent tonsillitis.

She had been married about one and three-fourths years. She stated that her libido was entirely normal, and that she had been unable to have intercourse with her husband since about the time of her six-weeks' check-up, at which time the lochia ceased and the lesion became worse.

FAMILY HISTORY

There was no tuberculosis, diabetes or similar illness in the family. Her parents were living and well. She had never had any pets such as rabbits and squirrels.

Her systems were essentially normal with the exception of the above difficulty.

Physical examination was normal with the exception of two small ulcerated canker sores on her gingiva and one on her tongue, and the large ulcerative lesion on her vulva.

Laboratory Data: Hgb. 11.6 gm., hematocrit 34 mm., RBC 3,520,000, WBC 10,500 of which there were 75 segs., 20 lymphs, 2 eosins., and 2 stabs. Sedimentation rate was 50 mm. in one hour, uncorrected. PA chest, catheterized urinalysis and VDRL were negative. Smears for Donovan bodies as well as for Ducrey bacilli were negative. A dark field examination and Frei test were negative. Cultures were taken from the lesion which revealed a growth of Monilia, Proteus, and staph aureus. Even though the staph aureus was coagulase positive, it was felt that all the growths were

Figure 2. Detail view of lesion, showing site at right of fourchette.

contaminents. Gamma globulin blood levels were reported from the Bio-Science Laboratory as 1. A large supply of serum was sent to the virus and rickettsia section of the Public Health Service in Chamblee, Georgia. This department reported only a titer of 4 for Herpes Simplex. The lesion was biopsied and debrided under general anesthesia. Pathological report was chronic, recurrent ulcerated lesion of the vulva of undetermined etiology. Sections, scrapings, and cultures were sent to the department of dermatology, mycology, bacteriology and histopathology at Duke University and their findings confirmed ours.

TREATMENT

She was treated with hot Sitz baths and varidase compresses four times a day. She was given Chloromycetin by mouth, 250 mg. every six hours for five days. By this time the lesion was clean and appeared to be healing nicely. She was given gamma globulin 20 cc. deep intramuscularly each day for five days. She was discharged September 26, 1958, with the lesion reduced to the size of a dime. The final diagnosis was chronic, recurrent ulcerated lesions of the vulva, believed to be of a viral etiology. Behcet's syndrome was entertained, but since she had had no eye involvement it was not established as the correct final diagnosis.

Later the patient moved to south Mississippi. Personal communication with her current physician revealed that the lesion had recurred on the left labia majora. The patient was seen in a vulva clinic at a medical center in a neighboring state and admitted to the hospital December 30, 1958, for a complete work-up. A copy of her record there has been forwarded to me. The tests and procedures that were carried out here were repeated, and their findings were essentially the same as ours. They also did a bone marrow aspiration, left eye preparation, and a bone survey for malignancy. The final consensus was Behcet's Syndrome, even though there was no eye involvement. However, it was predicted that the syndrome would complete itself in years to come. She was treated with ATCH, Cortisone, compresses of antibiotic solution, and several pudendal blocks. She was discharged from the hospital January 20, 1959.

She is now on a maintenance dose of 30 mg. of Cortisone every day and is enjoying a remission of this apparently chronic disease, according to her present physician.

SUMMARY

A case has been presented of a young, white, married female with a recurrent undiagnosed ulcerative lesion of her vulva and ulcerative lesions of her gingiva of 10 years duration. It is possible that this case represents a Behcet's Syndrome that has not fully developed as the eye manifestation is lacking. The steroid therapy may conceivably prevent the syndrome from completing itself. She is currently enjoying the longest remission of this disease while on a maintenance dose of Cortisone. ★★★

128 South Broadway

OUT OF WORK

On a typical work day, American industry experiences absenteeism to the tune of 37,000 persons due to hay fever, 29,000 because of chronic sinusitis, and 16,000 who have bronchitis. In one year, acute illness and injury causes a loss of one billion work days for those under age 25 and half of the lost time found the absentee confined to bed. Nor are children out of the picture because the average time loss from classes last year for respiratory disorders alone amounted to 8.4 days per child.

Present Outlook in Tuberculosis

CLYDE A. WATKINS, M.D.
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The present tuberculosis problem is discussed by the superintendent of the Mississippi State Sanatorium. Incidence and treatment are considered. The author concludes that a preventive vaccine or drug that will sterilize the body of tubercle bacilli in a short time is necessary for tuberculosis to be completely wiped out.

During the past ten to 15 years there have been marked changes in the situation with regard to tuberculosis. Since the advent of Isoniazid in 1952 the death rate, which had previously shown a slow, steady decline, dropped off sharply. Five hundred and eighty-one people died of tuberculosis in Mississippi in 1949 as compared with 152 in 1959. These figures are representative of the nation as a whole. In contrast to the death rate the incidence of infection, indicated by tuberculin test surveys among school children in other states, has not shown any marked drop but has continued about the same rate of decline as previous years. The incidence of positive tuberculin reactors among children and young adults in Mississippi is about 5 per cent.

Tuberculosis has become a disease of older rather than younger people, and especially of older men. Among the new cases males predominate two to one over females. The non-white population still suffers more from tuberculosis in proportion to their numbers than whites, and the percentage of active cases is higher in alcoholics, diabetics, and mentally disturbed patients than the general population. It has been amply demonstrated that the use of steroids may cause a flareup of latent tuberculosis, and patients who have had gastric resections probably have an increased tendency toward the disease.

ACCURATE DIAGNOSIS

In recent years much more emphasis has been placed on accurate diagnosis of pulmonary disease than in the past. The number of cases of pulmonary fungus infections diagnosed has increased markedly in recent years. This is probably due to more accurate diagnosis rather than increased incidence. A positive histoplasmin test is more common among young people in Mississippi than a positive tuberculin test. Sarcoidosis is a common condition which is more prevalent among Negroes. Emphysema, bronchiectasis, and atypical pneumonias constitute a large group in whom tuberculosis must be excluded.

ANTITUBERCULOSIS DRUGS

For the past ten years or more it has been standard practice to treat every case of active tuberculosis, and many cases of suspected tuberculosis, with antituberculosis drugs. Isoniazid, Streptomycin, and PAS are the three principal ones. Among the less effective drugs used are Viomycin, PZA, Cycloserine, and Kanamycin. These latter drugs are also more toxic and consequently have a limited place in treatment. For several years the accepted dosage of Streptomycin has been 1 gm. twice a week, given intramuscularly, the average dose of Isoniazid is 300 mg. per day, and the recommended dose of PAS is 12 gm. per day. Because of the emergence of resistant organisms the use of any one drug alone has been generally condemned. In the average case it has been difficult to determine a definite superiority of all three of these drugs over a combination of any two. It has been definitely proved that these drugs, in whatever combination used, must be continued for a long time. The minimal time of treatment is at least one year. Almost every case should be treated for 18 to 24 months and many for an even longer period.

From the professional staff, Mississippi State Sanatorium.
Read before the Section on Preventive Medicine, 92nd Annual Session, Mississippi State Medical Association, Jackson, May 10-12, 1960.

During the past year there has been a trend away from two drug treatment in favor of all three standard drugs (Streptomycin, Isoniazid, and PAS) used simultaneously from the start. Recent reports also favor increasing the dose of Streptomycin to 1 gm. daily and the Isoniazid to 600 or 1,000 mg. daily for the average size adult. These are given along with PAS (few people could tolerate more than the old recommended dose of 12 gm. daily) for about three months routinely and then reduced to the previously mentioned doses if improvement has been satisfactory. There is no definite evidence that a reduced amount of PAS is not equally effective when 12 gm. cannot be tolerated. At the Mississippi State Sanatorium the two drug treatment is used for the average chronic case but the three drug increased dose regimen is favored as a routine in the fresh or acute cases. (For a long time all desperately ill patients, including those with meningitis or miliary tuberculosis, have been treated intensively with all available drugs.)

STEROIDS

Steroids, which were mentioned earlier as a serious hazard for patients with latent tuberculosis, have, strangely enough, become accepted in recent years as a major drug in treatment of this disease. For some time steroids have been described as lifesaving in overwhelming types of tuberculous infections. Recently their more ardent advocates have recommended their use in initial treatment of all cases. Steroids are being used more frequently at the sanatorium but only if it appears reasonably certain that drug susceptible bacilli are involved and antituberculosis drug coverage is employed at the same time.

In times past the large number of relapses in tuberculosis has been due to the fact that the disease was never actually arrested in the first place, so at the present time resectional surgery is used frequently in the treatment of tuberculosis. It is usually reserved for patients whose disease has not shown satisfactory clearing after a reasonable period—usually four to six months—of rest and drugs. Along with refinements of surgical techniques, advances in anesthesia have helped to lower the mortality to a low level. Surgery is also justified in many cases in which a definite diagnosis cannot be established otherwise and especially in those in which there is a probability of malignancy. It will require several more years to properly evaluate the role of surgery in tuberculosis. Because of the large excess of cases over the number of sanatorium beds available at the start of this decade, a great many patients were treated with antituberculosis drugs outside the hospital. Mississippi was a pioneer in the home treatment of tuberculosis.

REDUCTION OF CASES

This program has reduced to a great extent the number of infectious cases and thus helped to reduce the number of people being newly infected. The drugs have also definitely reduced the length of hospital stay and the necessity for long periods of rest. Many cases can be rendered non-infectious by the use of drugs alone. However, in some of these cases the disease may spread at a later date. It is generally agreed that every new case should ideally be given initial treatment in a sanatorium, certainly during the infectious stage, where the disease can be adequately evaluated and the individual response to treatment determined. If surgery is indicated, it is very important that this be done at the optimum time, and this can usually be done only among hospitalized patients.

The relapse rate among those who have adequate treatment varies among different studies but is usually about 10 to 15 per cent. The number of people infected with tubercle bacilli, or who have a positive tuberculin test, in the United States is estimated to be 30 to 50 million. Although less than 1 per cent of this group is expected to develop serious clinical disease, these people, in addition to a large reservoir of patients who would have died a few years earlier without drug treatment, will maintain a source of infection for the general population indefinitely.

Chest x-ray survey among the general population has been a very successful case finding method for a good many years. This is still an excellent method but among the general population the number of previously unknown cases of tuberculosis discovered has reached a rather low level, and it is suggested that future programs should be worked out to survey specific groups. The dangers of radiation, which have received much attention in recent years, present no problem in this respect.

TUBERCULIN TEST

The tuberculin test recently has become much more widely used both in case finding and diagnosis, and it seems certain that its usefulness will increase. The intradermal test is by far the most reliable. With long term use of drugs, the vast majority of adequately treated patients will probably represent very little danger of infection to others although it is likely that even in these people the bacilli will remain viable.

As a result of advances in treating tuberculosis, and the attendant publicity, much of the public

has become complacent about the danger of tuberculosis. As long as we have a large number of cases who have far advanced disease when first discovered there will be continued infection of other groups which will not develop clinical diseases for many years.

With the knowledge, drugs, and surgery at hand it is conceivable that a crash program, unlimited funds, and public support could result in virtual eradication of tuberculosis in this country except as a medical curiosity within the next generation or so. However, unless a highly effective preventive vaccine or drug is developed that will actually sterilize the body of tubercle bacilli in a short time it is probable that the tuberculosis problem will be with us indefinitely. ★★★

Mississippi State Sanatorium

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WIFELY WORTH

How much is a wife worth? The Family Service Society of Yonkers, N. Y., has figured it out, according to the April 25 *Insider's Newsletter*. Assuming two young children, the Society concludes that this is what it would take to replace a wife: one full-time employee (a nurse-governess at about $80 a week), and two part-timers (a housekeeper for 16 hours weekly at $1.50 an hour and a baby sitter for six hours a week, 48 weeks a year, at $1 an hour). Total of these salaries, plus the Social Security taxes on them: $5,800 a year.

Clinicopathological Conference V

Conducted by the Department of Pathology
Mississippi Baptist Hospital
Jackson, Mississippi

CPC V concerns an 11-year-old girl with a persistent fever and radiographic evidence of pneumonitis of undetermined etiology. Three weeks prior to admission to the Mississippi Baptist Hospital, she had begun complaining of headaches and dizziness when she took part in sports. Past history and physical examination are discussed, and the diagnosis is given. Participants in the conference are Drs. James M. Packer, George Gillespie, Louis Schiesari, and Hans K. Stauss.

An 11-year-old white girl was admitted to the Mississippi Baptist Hospital on January 23, 1960, because of persisting fever and radiographic evidence of pneumonitis of undetermined etiology. The illness had begun about three weeks prior to admission. The patient complained of headache and a sensation of being hot and dizzy while actively engaged in sports at school. Insidious cough and fever developed and progressed. The fever abated somewhat upon penicillin treatment, but the cough persisted and remained nonproductive. There were no abnormal physical findings.

During the first week, there was transient anorexia and an eight pound weight loss, but subsequently the appetite was good, and the girl regained her normal weight. When the fever increased again there were still no abnormal physical findings, but chest x-ray examination revealed a pneumonitis, and Declomycin was started. During the first half of the week of admission, the girl was afebrile, but two days prior to admission 103° fever occurred and the repeat film revealed persisting pneumonia.

There had been no associated sore throats, lymphadenopathy, skin lesions, G.-I. or G.-U. or ONS disturbances; no dyspnea, wheezing pleuritic pain or expectoration. The headache had been intermittent and only mild. Cough had not been paroxysmal or otherwise harassing, and was usually worse when the fever arose. There had been no known contact with tuberculosis or other severe, protracted or unusual infections, and no exposure to dusts or obviously sick animals. The patient had a dog and a parakeet.

The past history revealed no neonatal difficulties or severe illness during or since infancy. The patient has had measles, but no pertussis. She had had Asian flu two years previously. There had been no vulnerability for frequent or severe respiratory infections; although, perhaps, her colds would be somewhat protracted and accompanied by a lingering deep cough when compared to her siblings and playmates. There was no history of foreign body aspiration, no known allergies or drug intolerances. The patient had had T & A at the age of eight. She broke her right forearm September 1959, with satisfactory healing of fracture.

FAMILY HISTORY

Two brothers, ages 16 and 10, and both parents are all living and well, and did not have any concomitant or preceding URI's; however, the maternal grandfather who lived with them did develop a coincident cough but no fever. The younger brother had asthma before age two, and the mother is allergic. No family diatheses are recorded. One paternal cousin was operated upon by the girl's attending physician for a pulmonary coin lesion which was due to histoplasmosis, an inactive lesion, in August 1958.

The temperature on admission was 98.8°, pulse 84, respiration 16, blood pressure 110/70 and the weight 86 pounds.

The physical examination revealed a well-developed and well-nourished, intelligent and cooperative youngster, who did not seem either acutely

or chronically ill nor in cardio-respiratory distress. There were no nailbed changes and no digital clubbing or cyanosis. E.E.N.T. and neck were negative. The chest was apparently slightly asymmetrical, and there was a very slight lag and limitation of motion of the left hemithorax and perhaps slight scoliotic concavity toward left, especially for a left-handed individual. There was a questionable percussion dullness in the left mammary area, but no shifting fluid dullness. The lung examination revealed increased breath sounds and vocal fremitus in the left mammary area into midaxilla. There were no increased or decreased breath sounds or fremitus, nor rales or wheezes anywhere else within either lung field. Examination of the heart revealed no enlargement or displacement to percussion and no friction rub, arrhythmia or murmur, shock or thrill were elicited. The abdomen was unremarkable; no masses were palpated, and the liver, spleen, and kidneys were not enlarged. Neurologic examination and examination of bones, joints, and skin were negative. The lymph nodes were not palpable.

The hemoglobin was 13 gm. per cent, sed. rate 31, hematocrit 38 vol. per cent, total WBC 32,600 with 92 segmenters, 2 bands, 1 eosinophil, 4 lymphocytes. The febrile agglutination tests and urinalysis were negative.

CHEST FLUOROSCOPY

Chest fluoroscopy in the office just prior to admission revealed an unresolved or very slowly resolving subacute pneumonitis, somewhat atypical, involving the lingula of the left upper lobe of undetermined etiology, but probably due to nontuberculous bacterial or granulomatous (fungal) infection. A chest P.A. film on admission showed a mass in the lingular segment of the left upper lobe which was thought most likely inflammatory. It was associated with some atelectasis of this lingular segment. The histoplasmin, blastomycin, and PPD tests were negative, as were complement fixation tests for histoplasmosis and blastomycosis. On January 25, 1960, a bronchoscopy was performed and on January 27 a bronchogram was made under topical anesthesia, followed by an exploratory thoracotomy two days later. No acid fast bacilli or fungi were demonstrated either in direct smear or in culture, from sputum and material recovered during bronchoscopy.

Dr. George Gillespie: Our case for discussion today involves an interesting problem of localized pneumonitis occurring in an 11-year-old white girl. In the first place, this is apparently a disease of relatively short duration since the child's symptoms are only about three weeks in total duration, and prior to that time, she was in apparent good health. The disease is characterized primarily by a persistent cough and fever which has been only partially responsive to antibiotic therapy. Outwardly the child has not seemed to be too sick, and physical findings are very few, except that x-rays persistently show a localized pneumonitis in the region of the lingular segment of the left lung. It is also noteworthy that the child has shown no vulnerability to infections in the past, and on physical examination there are no stigmata of chronic lung disease, such as clubbing of the fingers. Laboratory findings are mostly negative which, of course, is of value in ruling out certain diseases. However, there is a 32,600 total white blood count with a shift to the left revealing 92 segs. and 2 band forms. At this time I would like to have Dr. Packer discuss the x-ray findings.

Dr. James M. Packer: Chest films (Fig. 1) in the P.A. and left lateral projections demonstrate the presence of a homogenous opacity which appears to involve the lingular segment, the mar-

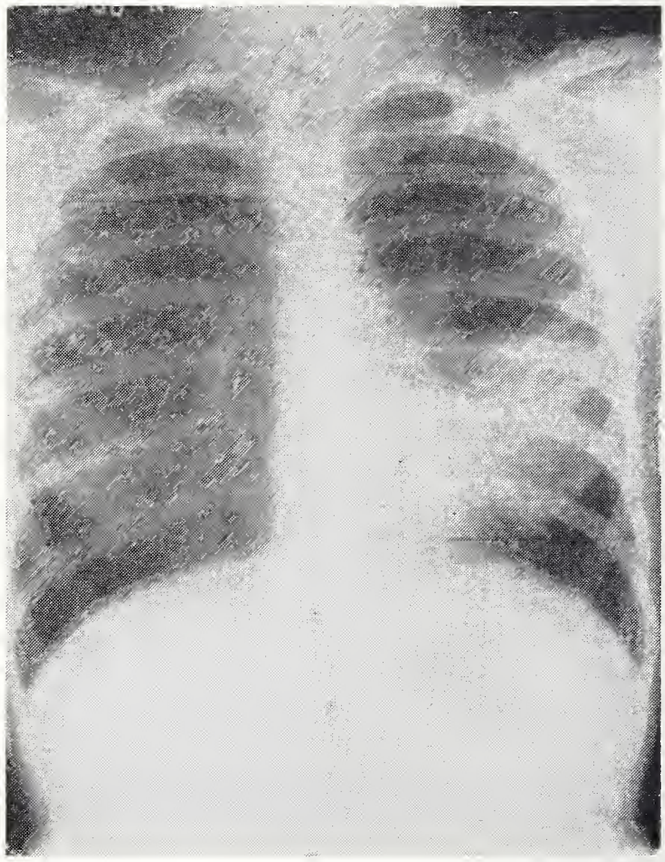

Figure 1. Chest films show a homogenous opacity which appears to involve the lingular segment. The margins of this density are fairly sharp with the major fissure presenting a convex margin toward the density.

gins of this density being fairly sharp with the major fissure presenting a convex margin toward the density. No fluid levels or evidence of radiopaque foreign body can be seen.

From the plain film appearance, one would anticipate inflammatory disease of the lingular segment with some element of atelectasis being present.

Following the plain film studies, a bronchogram was done. No filling of the diseased area could be obtained. The bronchi of the upper and lower lobes which were filled showed no abnormality. Thus the bronchographic studies point toward some type of obstructing lesion in the region of the lingular bronchus.

BRONCHUS OBSTRUCTION

Dr. Gillespie: In considering all possible causes of this picture, one is immediately impressed with the likelihood of some process obstructing a bronchus or larger bronchiole causing a pneumonitis distal to that point. This type of picture is characteristic of any type of foreign body which may cause such an obstruction. Therefore actual foreign body aspiration or aspiration pneumonitis involving vomitus or some toxic chemical substance must be considered. The possibility of benign or malignant tumor growth causing such a blockage must also be looked into. Bronchiectasis will certainly be listed in the differential consideration, although the absence of sputum and the absence of history of previous respiratory illnesses argue against this diagnosis.

Various types of atypical pneumonitis and, more specifically, the possibility of psittacosis must be entertained because of the specific reference to the parakeet which the child owns. Finally, some type of embolic phenomena which may present a localized infarction of this segment of the lung must be considered. There are various things against this diagnosis, but nevertheless, it must be included.

These possible diagnoses must be evaluated by considering the past history and physical findings.

Foreign Body Aspiration. The protocol shows no history of foreign body aspiration; however, the child apparently became ill while actively engaged in sports at school. It is well-recognized that foreign body aspiration sometimes occurs under the stress of strenuous activity without being noted by the individual at the time. One point against this possibility is the insidious development of the cough. Aspiration of a foreign body would probably bring on a much more abrupt onset of cough. Furthermore, the cough is described as not paroxysmal in type. An aspirated foreign body would more likely produce paroxysmal coughing rather than this type which increases with fever. Furthermore, the x-rays show no foreign body and the bronchoscopy would probably have removed any that were present.

The only necessity for a thoracotomy would be in the case of a foreign body which was not removable by the bronchoscope. This does not seem likely.

In short, although there are many features about the case suggesting foreign body aspiration, this diagnosis does not fit the details. The possibility of aspiration of liquid or gastric substances into the lung must be considered. However, in the absence of a specific episode, this solution is not probable. Aspiration of these types of substances would probably result in a more widespread pneumonitis and involve the right lower lobe as well as the lingular segment of the left. Statistically, aspirated material will go to the right lower lobe in greater frequency than to the left, because of the straight downward passage of the right lower lobe bronchus. Therefore, the diagnosis of aspirated material can probably be eliminated.

Bronchiectasis. There are several excellent reasons why this diagnosis is not likely, although it must be considered with any type of pneumonitis. The primary things against it are the child's apparent good health in the past and the fact that she has never seemed especially vulnerable to respiratory infections. Victims of bronchiectasis usually have a history of frequent repeated respiratory infections. Also, this patient produces little or no sputum. Bronchiectasis cases, for the most part, are heavy producers of sputum, although there are certain types known as dry bronchiectasis which are characterized primarily by coughing. There are no stigmata of chronic lung disease, such as clubbing of the nails or cyanosis of the nailbeds, and in general the apparent good nutritional status and good health of the patient belies this diagnosis.

Pneumonia. The possibility of an atypical type of pneumonia and, more specifically, psittacosis is raised by the history of the child having a parakeet. I have had little personal experience with this disease; however, I have referred to the textbook by Rivers on *Viral and Rickettsial Infections*. There is a rather striking similarity between the clinical course of the patient with psittacosis and the clinical course described here.

Rivers writes: "The onset (of psittacosis) may be sudden with chilly sensations, fever, anorexia, sore throat, malaise, photophobia, and severe

headache, or the beginning may be gradual and insidious." (This description fits the present case in that the onset was rather abrupt and the patient did have a rather severe headache.)

Rivers continues, "The temperature at the onset is usually from 100° to 102°F. and gradually rises. During the second week, in severe cases, it maintains itself at a high level with slight morning remissions. . . . A slight irritating, dry cough in the first few days persists or increases in intensity; however, despite extensive lung involvement, cough may be insignificant or absent throughout the entire illness. Sputum, always scanty, is sometimes entirely absent." (Here there is a definite deviation from the present pattern in that the cough in the case under consideration was one of the most prominent features. Apparently in psittacosis it is not too marked as a rule. There is a definite similarity in that sputum is very slight, if any.)

Rivers further describes cases of psittacosis: "The real extent of pneumonitis is usually not evident until roentgenologic examination has been made, which reveals patchy areas of consolidation over one or both lungs. Physical signs begin to disappear by the third week, but x-ray examinations disclose a slow resolution." This description shows a marked similarity to the present case in that physical findings were very slight. The time interval of three weeks is similar to this case, and x-ray findings are persistent as in the case under consideration. There is a marked area of difference in that the leukocyte count with psittacosis is usually normal or subnormal and there is a definite leukopenia in approximately 25 per cent. In contrast, the present case had a WBC of 32,000 which would indicate a rather marked inflammatory process consistent with a bacterial type of pneumonitis or abscess formation. No complement fixation test was done for psittacosis; however, this would have been one further method of distinguishing this possibility.

It is noteworthy that the patient did have negative skin test for histoplasmin, blastomycin, and tuberculosis. There were also negative complement fixation tests for histoplasmosis and blastomycosis. There was no evidence of acid fast bacilli in the sputum which was recovered from bronchoscopy. All of these negative findings would tend to rule out rather strongly a fungal or tuberculous infection. Although there are similarities with the cases of psittacosis described, there are definite areas of differences primarily in the WBC and in the fact that the present patient has a rather localized pneumonitis, whereas normally it is somewhat patchy with psittacosis. It is also to be noted that the parakeet in this case was apparently not sick. As a rule there is some obvious evidence of sickness with the fowl in psittacosis cases.

Tumor Formation. Because of the marked youth of the patient this possibility at first seemed unlikely. Upon review of the literature however, I find that there are definitely some cases reported of bronchial adenoma in patients this young. Soutter in reporting in the *Journal of Thoracic Surgery* and reviewing the cases in Massachusetts General Hospital from 1909 to 1954 found 56 cases of carcinoid adenoma of the bronchus. The age range in these cases was from 10 to 76 years. The average age is approximately 38 years of age. In general, it is noted that the bronchial adenomas do occur in the younger age group, and occurrence in a child of 11, although unusual, is quite possible. It is also observed that approximately 60 per cent of the occurrences in children are in females. This fits the present situation.

A careful review of the symptoms associated with this condition reveals that cough is the predominant symptom occuring in 52 out of 56 of the patients and that 36 of the 56 revealed pneumonia, distal to the tumor. There are other associated symptoms; one of the more common is hemoptysis, which was not present in our case. However, these symptoms vary depending on the type and location of the tumor. These tumors are notoriously vascular. The recorded history and physical findings make this diagnosis a strong possibility. The presence of a distal pneumonitis would, of course account for the elevated WBC, the fever, and other symptoms.

Little consideration need be given to the possibility of malignant tumor, namely carcinoma of the bronchus, since it is so extremely rare in patients in this early age group. Likewise, the possibility of embolic phenomena with associated infarction need not be given serious consideration in view of the patient's apparent good health. There is no evidence of rheumatic heart disease or peripheral thrombi.

In summary, the diagnosis which best fits the recorded history and physical examination is a bronchial adenoma. On the basis of possibility, I would also list foreign body aspiration. Now we will hear from Dr. Schiesari, as to what she actually had.

Dr. Louis Schiesari: Dr. Stauss, will you tell us what you found and what was your impression of this patient.

Dr. Hans R. Stauss: As I told the intern before the endoscopic examination, in the absence

of the history of foreign body aspiration, we had to consider the possibility of the bronchial adenoma as responsible for the unresolved atelectasis and pneumonic consolidation of the left upper lobe lingula as well as for the mass in the left hilar region shown by x-ray. At the time of bronchoscopy a smooth, round, reddish tumor mass was seen within the left upper lobe bronchial orifice, situated where the lingula bronchus opening ordinarily would be seen and largely occluding the lumen of the left upper lobe. This mass had the characteristic gross appearance of a bronchial adenoma, and because of the great bleeding propensity of such tumors, no biopsy was taken. The bronchogram also confirmed this bronchial obstruction and suggested that a left upper lobectomy might well be necessary for removal of this tumor.

At the time of left thoracotomy a left upper lobectomy was performed. It appeared that the tumor extended submucosally and extrabronchially to the anterior aspect of the junction of the left upper lobe bronchus with the main stem bronchus. For this reason, additional tissue was excised; e.g., the left upper lobe take off was actually excised out of the left main bronchus, requiring a minimal bronchoplasty, after serial frozen sections had shown that there was no tumor at the last line of section. The patient made a remarkably smooth and uneventful, rapid recovery and was discharged on the seventh postoperative day.

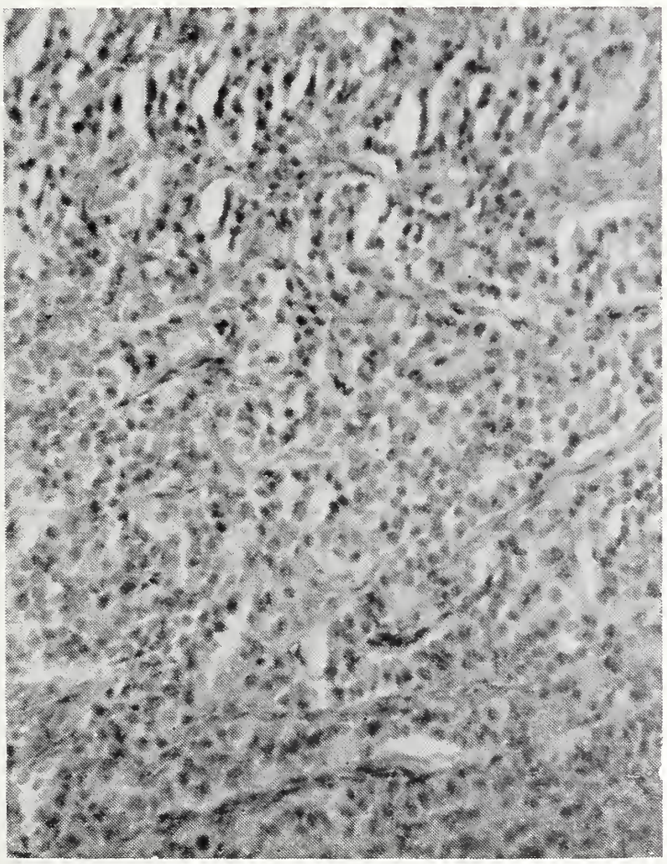

Figure 2. Photomicrograph shows cords or strands or round masses of fairly uniform small round cells within which empty spaces sometimes resembling acini are seen. This is characteristic of microscopic picture of bronchial adenoma.

Subsequent evaluation revealed that she was doing very well and remained totally asymptomatic. Bronchial adenoma, of course, is a tumor more commonly seen in females although usually in the post rather than pre-puberal years, often manifesting themselves by bleeding during the late teens. In response to one of the comments, most of the relatively few deaths associated with bronchoscopy reportedly have been the result of massive bleeding upon biopsy of the bronchial adenoma.

Dr. Schiesari: The specimen received in the laboratory was represented by a soft rubbery left upper lobe, the only crepitant portions being found in the apex and along the margins. The cut surface was pinkish tan and granular to nodular on palpation. The main bronchus was partially occluded by a roughly cone shaped tumor which on cross section appeared as a yellowish gray homogenous opaque mass extending through the submucosa and through the cartilagenous wall of the bronchus. The over-all dimension of it was about 2.5 cm. with the portion through the wall much more expanded than the portion protruding inside the lumen. The microscopical examination confirmed the clinical diagnosis of bronchial adenoma to which we added carcinoid variety. The pulmonary parenchyma was extensively damaged showing acute pneumonitis, abscesses, organization, and bronchiectasis.

The bronchial adenoma is a slow growing late invasive tumor that constitutes about 5 per cent of all primary lung neoplasms. It occurs more often in the female than in males and between 20 and 40 years of age. Usually the age of onset is several years less in the female than in the male. These tumors arise in the bronchial mucous glands, and they are found predominantly in the main stem bronchi because mucous glands here are much more numerous than in the smaller peripheral bronchi.

The tumor extends intramurally projecting into the lumen of the bronchus where it is covered by normal mucosa, but the growth develops more in the peribronchial tissue. Because of this peculiar behavior such descriptive names as "collar button" and "ice-berg tumor" have been given to these lesions. The intraluminal projection results in bronchial obstruction which is immediately fol-

lowed by pneumonitis, abscesses, bronchiectasis, and hemorrhage. These complications are of a more immediate concern to the physician than the tumor itself, and usually the lobe removed is so much devastated that this radical procedure always appears indicated.

Microscopically, there are two different patterns, a carcinoid and a cylindroid form. Both forms faithfully reproduce their counterparts found in the intestine for the former and the salivary glands for the latter. As shown in the photomicrograph (Fig. 2) the microscopic picture is characterized by cords or strands or round masses of fairly uniform small round cells within which empty spaces sometimes resembling acini are seen. These spaces are interpreted as delicate sinusoidal vessels which account for the hemoptysis and for the easy bleeding when a biopsy is attempted. The carcinoid variety is more common and less malignant than the cylindroid in which invasiveness and tendency to metastasize to regional lymph nodes and distant sites is much more pronounced.

Because of its close resemblance to the corresponding intestinal tumor, the carcinoid variety of the bronchial adenoma has been investigated as far as the biological behavior is concerned, namely the production of serotonin syndrome. This is somewhat difficult to demonstrate because of the extreme rarity of distant metastasis of this lesion. Recently cases of carcinoid adenoma with metastasis to the liver and accompanied by serotonin syndrome have been reported. According to these reports, whenever a carcinoid adenoma metastasizes of the liver, such a syndrome arises and the urine is positive for the serotonin metabolite 5-HIAA.

Whether this tumor should be called bronchial adenoma or grade I adenocarcinoma, as some pathologists like to classify it, remains a question of personal preference. I would reserve the name of adenocarcinoma for the cylindroid variety. The important point to keep in mind is that once it is removed completely, it does not reoccur so that the prognosis in this girl should be excellent. ★★★

1190 North State Street

LOW SUGAR

The old saw that physicians are poor businessmen obviously doesn't apply to the resourceful young intern who wanted to take his wife to the Sugar Bowl grid classic at New Orleans last winter. His $50 holiday budget was something short of $20 a day motel rooms—three days occupancy payable in advance. On arrival in the Crescent City, he telephoned his favorite professor of medical school days who, with sympathetic understanding, agreed to admit the young doctor and his wife to a local hospital in semi-private accommodations "for observation." After a good night's rest the couple enjoyed a leisurely New Year's morning breakfast in bed, the "attending physician" ordered their discharge in time for the game. Total cost: A $24 hospital bill, including urinalyses.

SPECIAL ARTICLE

Conqueror of the White Death

B. B. O'MARA, M.D.
Biloxi, Mississippi

During the spring of 1911, two physicians lay side by side in an El Paso, Texas, tuberculosis sanatorium. One, realizing that he was dying, exacted a promise from his recovering companion to devote his life to the eradication of tuberculosis.

The physician who survived was Dr. Henry Boswell, founder and superintendent for more than 40 years of the state sanatorium near Magee. In this moving essay, Dr. O'Mara recalls Dr. Boswell's legendary life of service.

BEING A MEMBER of the staff of the Mississippi State Tuberculosis Sanatorium from the latter part of 1925 until September 1930, afforded me the rare privilege of being associated with a wonderful person. During those years of close contact with Dr. Henry Boswell, I learned to admire, to love, and to respect him for the man he was, for his unexcelled ability as an administrator and for the ease and simplicity with which he directed the future of the sanatorium, and at the same time acted as father and advisor to the staff and all the patients. Those of us who served with him agree that he had no superior as an executive. I, therefore, deeply appreciate the honor of being called upon to deliver the Distinguished Service Oration. When Dr. Boswell's life accomplishments are considered, it is with a feeling of deep humility and inadequacy that I attempt to pay tribute to him.

On March 26, 1884, Georgianna Boswell, the wife of John Boswell, gave birth to a son in Choctaw County, Alabama. They named him Henry. He attended grade school at Hinton and high school at Rock Springs, Alabama. From there he went to the University of Nashville, where he received his M.D. degree in 1908. He interned at the Nashville General Hospital and then moved to Providence Infirmary in Mobile, Alabama, as house surgeon. Then he went to Laurel to enter the practice of medicine. It was there that he met and fell in love with Iola Saunders of Oxford, an English instructor in the Laurel High School. They were married June 14, 1910, and to their union five children were born. They, along with their 16 children, are now highly respected and outstanding citizens of our state and nation.

In November, 1910, Dr. Boswell developed active TB and took treatment in a sanatorium in El Paso, Texas. After approximately one year, he returned to Mississippi and became the first full time public health field worker in the state, and also the first full time county health officer of Prentiss County.

On his departure from the sanatorium in El Paso, another physician in the advanced stages of TB occupying a bed next to his, clasped Dr. Boswell's hand with a sad farewell and exacted a promise from him that he would devote his life to the eradication of tuberculosis. Thus a promise became a lifetime work.

In 1916, the Mississipppi state legislature passed a law authorizing the establishment of a state TB sanatorium and allotted an appropriation of $25,000 for its construction. Two hundred acres of rolling pine land were donated by Eastman-Gardner Lumber Company and by citizens of Magee and thus the sanatorium was born three miles north of Magee. Doctor Boswell was appointed

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1960 Distinguished Service Oration.
Past president and vice speaker, Mississippi State Medical Association.
Read before the House of Delegates, 92nd Annual Session, Mississippi State Medical Association, Jackson, May 10-12, 1960.

superintendent in 1917, and from that period his life was so entwined and dedicated to the progress of the sanatorium that to think of one was to think of the other. I for one, and there are many others, believe the name should be changed to the Henry Boswell Sanatorium.

FIRST PATIENT

When he assumed charge there were only two 20-bed cottages for patients and two other small buildings, all incomplete. The first patient, Mrs. Lela Hawkins was admitted February 4, 1918. She is still living and attends every meeting of the Henry Boswell Society. The two cottages for patients were filled by early summer. Due to the shortage of adequate help, with only one nurse and one orderly on duty, Dr. Boswell also acted in that capacity, serving meals, emptying bed pans, scrubbing floors, so that the patients be more comfortable.

From that period on, his life was an aggressive fight for the betterment of conditions and facilities at the sanatorium. At that time, in 1918, the death rate from TB in Mississippi was 139.8 per 100,000 population. During the 1919 campaign for the legislature, Dr. Boswell traveled over the entire state, taking his dream of a modern TB sanatorium to the people, doing verbal battle with any candidate for the legislature that opposed him. So convincing and effective was he, that in 1920, an appropriation was passed for $1,043,000 for expansion, the largest sum ever appropriated by any state for TB work at that time. At each succeeding session of the legislature, he worked long and untiringly for increased revenue for a better institution, and at the same time, strived for passage of laws to improve the health of the people as a whole. We, today, enjoy the benefits of his dedication.

HONORS

From the small size of the sanatorium in its infancy to its magnificent stature of today, each improvement brought a light of satisfaction and joy to his eyes.

A man whose vision was responsible for the remarkable growth of this superb institution was destined to be selected by his colleagues for many honors. Among these were: president, Mississippi State Medical Association; president, Mississippi State Hospital Association; president, Mississippi State TB Association; president, National TB Association; president, Southern TB Association; and president, American Trudeau Society.

He served as chairman of the Mississippi Hospital Association, vice chairman of the Board of Trustees of Mental Institutions and was an instructor at the University of Mississippi School of Medicine. He was a member of the Central Medical Society, the Mississippi State Medical Association, Southern Medical Association, American Medical Association, American Sanatorium Association, International TB Association, and a fellow of the American College of Physicians.

He was a member of the Baptist church, the Masonic Lodge, and the Shrine. His former patients formed the Henry Boswell Society in his honor, a most loyal group supporting every phase of sanatorium life. He was awarded a plaque from the Mississippi Society of Civic Awards, and received the American Legion Distinguished Service Award. He was honorary president of the Mississippi Golf Association, and the state junior golf championship trophy was named the Henry Boswell Trophy in his honor.

Dr. Boswell was almost as versatile in golf as in medicine. Those of us who played with him marvelled at his ability to shoot in the high 70's and low 80's. He was the only golfer I know who made three holes in one after he had passed his allotted time of three score and ten years. He was a firm advocate of a hobby, and all of us should

HENRY BOSWELL, M.D., 1884-1957

draw a lesson from him and have some form of recreation to serve as a relaxation from our lives of strenuous activity.

Due in great part to the vision and life work of this one man, the death rate in Mississippi from TB had dropped from 139.8 in 1918 to 7.9 per 100,000 in 1957. Based on a population of 2,000,000 this means roughly, 2,638 more lives saved annually at the present as compared to 1918. This is a crowning achievement.

SUMMARY

Dr. Boswell was an humble man yet he walked big and tall among his fellowmen, but with a tread so soft that the lightest slumber was undisturbed. He was a great man, and the intrinsic quality of greatness, so rare in human endeavors, was easily recognized throughout his every undertaking in life. He had the wit and wisdom of a Ben Franklin, the dignified diplomacy of a Thomas Jefferson, and the rugged honesty of an Abe Lincoln.

He believed in the integrity of other people. He believed in honoring the gallantry of elderly people, through whom has been preserved for us the heritage of the past. He believed in the challenge of the future, knowing full well there would be no future except that it be kept alive through us. He believed in the nobility of work and duty, in the enrichment of play, and the sacredness of friendship. He had the respect and admiration of intelligent men and women and at the same time, the love of little children. Therefore his life could be described as a tapestry woven from the golden threads of many beautiful and grateful lives.

In peaceful serenity, on December 16, 1957, he bade all of us a temporary farewell and is now quietly resting in a hallowed spot on the grounds of his beloved sanatorium.

There is a plaque in his honor in the lobby of the sanatorium from the Mississippi Society of Civic Awards. In closing I think it most appropriate to quote from it.

"In grateful recognition of his courageous leadership, indomitable purpose, and his world renown achievements in combating tuberculosis in the service of the people of Mississippi, this is dedicated to Henry Boswell, illustrious physician, eminent health authority, sagacious counsellor and forthright patriotic citizen." ★★★

146 Porter Avenue

THE LAME AND THE HALT

Forty-one per cent of "healthy" executives have an illness they're not aware of, the University of Pennsylvania School of Medicine has found. Checking executives who came in for routine visits, the school found that of the 41 out of 100 who thought they were in good shape, 40 per cent had gastrointestinal troubles, 30 per cent had heart diseases, and 30 per cent had had some metabolic disorder, like diabetes. The doctors' suggestion: A strict program of annual checkups for all executives.

—*Insider's Newsletter*

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JOURNAL OF THE
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EDITORIALS

A Pledge for Progress

THE EDITOR and the two associate editors elected by the delegates to the 92nd Annual Session of the Mississippi State Medical Association wish to express their gratitude for being elevated to these important positions. We take this opportunity to express some thoughts relating to your JOURNAL as it now exists, some goals that we will seek to achieve, and some ideas on medical journalism *per se*.

As your editors, we realize that we have been initiated into something that in an unbelievably short time has set a tradition for excellence. We are impressed with the efforts of the publication committee, the managing editor, and the recently acquired editorial assistant. The efficiency, the organization, and the zeal found in the Central Office is most reassuring. Everyone who has read it can testify that your JOURNAL has been in professional hands.

This record, of course, will be maintained. However, if at the end of a year's time we cannot point to an even greater publication, then this newly acquired tradition will suffer. We intend to provide scientific articles that have an appeal to every physician in Mississippi. Your JOURNAL will also contain information relating to every area of medicine—economic, social, political, and organizational. You will find that to read your JOURNAL will be to keep abreast.

The foregoing can be recognized as basic tenets. However, an even greater purpose can be achieved. We hope to stimulate a desire to write that will extend into every corner of Mississippi. Successful physicians are active. The busiest ones have little time for anything but the everyday task of treating the sick. However, the greatest stimulus to thought is to write. There is not a doctor in Mississippi that does not have a contribution to make to medicine. A medical society characterized by a membership that utilizes its official publication will become a more useful and a more influential force for the high purpose that is our mission. This will be number one on our list of aims. Medical journalism plays

a very significant part in the profession of medicine. The obligation of medical journalism touches all of us. It must be sensitive to the demands of an ever-changing science. It must be tuned in to the pressures both from within and without the medical fraternity. It must be ethical in its intent and method.

These are some of the attitudes of your editors that they will use in performing their duties. Help us in our task.—T. J. M.

'Let's Use, Not Abuse, Health Insurance!'

I

The American Medical Association has performed a new and significant service for the medical care-consuming public, physicians, and insurance carriers who provide a major means of helping the nation finance private medical care costs. The service shows up in the new eight panel pamphlet, "Let's Use, Not Abuse, Health Insurance." Neatly and logically, the publication sums up a host of common sense, down to earth facts and advice which, if heeded, can help people make their health insurance contracts do a better job.

The beginning premise is that health insurance is an investment and the reader is admonished to protect any investment he makes. Take the family automobile, for example. You don't go hot-rodding it around town for if you do, you'll end up with a worn out—or wrecked—piece of useless machinery you can neither drive nor sell. When health insurance is put to uses for which it is not intended, it, too, wears out and fails in its primary purpose.

II

Insurance doesn't create any new money but some seem to feel that payment of a premium is purchase of a license to make claims at will on the carrier. Thoughtful, prudent people know that insurance is merely a way of pooling money to provide for some future, unforeseen economic circumstance which they alone would otherwise be unable to meet. When economic adversity does occur—and is within the meaning of the insurance contract—then a payment is made within preagreed benefit limits. This is the principle of *indemnifying* a policy purchaser against a stated adverse circumstance.

So when insurance benefits are collected, it is mainly the policy purchaser's money coming back to him through the pool he helped to create. Emphatically, it's not the company's money. The small profit of the insurance company was realized when the sale was made and the initial premium collected. So when insurance benefits are abused, the policyholder making the claim is actually dipping into the pockets of others. AMA's pamphlet reminds the reader that you don't have to use insurance to "collect." The assured wins when he is spared illness and injury against which the policy protects him.

III

Nobody expects automobile insurance to purchase gasoline, oil, tires, and batteries but some would have health insurance cover aspirin for simple headache. When health insurance is used to cover small health services, then its major purpose is prevented. A majority of health insurance claims are for bills of less than $100. In 1959, the average Medicare claim paid to Mississippi physicians was $78.10, a further illustration—not an abuse. Not everybody understands that it costs just as much to adjudicate and process a claim for $10 as for $1,000 and sometimes the lesser amount is the more difficult job administratively.

The Blue plans and private companies are getting away from "first dollar" contracts for this very reason. Any insurance carrier can do only so much with the premium dollar. Of course, some companies are able to edge competition with lower

"If I were you I'd recheck the order."

administrative costs but in the last roundup, there can be little real difference. A first dollar contract provides payment for all care costs incurred up to the contract maximum and it's an expensive device in health care financing.

On the other hand, "deductible" and "co-insurance" contracts offer more for the money because the nickle and dime claims are not covered. For example, a deductible contract will pay care costs above the first $25 or $50, for example, up to a stated maximum. The co-insurance feature simply means that the assured must participate in all levels of payment, even above the initially deducted amount. Thus, a $25 deductible, 10 per cent co-insurance contract would pay the policyholder $427.50 on a $500 claim. The assured would pay the first $25 and $47.50 of the balance. This enables the carrier to do a better job with the premium dollar, to eliminate small or under $25 claims, and provides a bulwark against abuse with beneficiary participation at all levels of indemnity.

IV

Pressure upon physicians by insurance-carrying patients can result in overutilization of hospital facilities. AMA cites an example: A $35 office procedure not covered by insurance was pressured into the hospital by a patient who wanted his "money's worth" from his insurance. Total cost: $100, and a misuse of the contract.

Overuse raises the price of next year's health insurance contract because the carriers have only one source of money—the policyholder. It may be difficult to think that everyone else is getting his, so why shouldn't it be the same for me. Until all 110 million Americans who own some form of health plan think differently, no contract can do the job for which it was designed.—R. B. K.

Medicine Show: 1960

Few people in the present generation recall having seen firsthand that unique American institution, the medicine show. Gone forever are the covered wagon, the kerosene lanterns, the genuine Indian chief, the snake oil, and the "professor" who presided over the whole ludicrous affair. But the medicine show could not hold a candle to television which just will not grow into the responsible maturity expected of it by the public.

Assorted murder and mayhem, unfunny comedians, and overly dramatized melodramatics are bad enough as program fare, but the scandalous rigging of quiz shows and commercials in unbelievably poor taste may yet bring about new federal controls over the airwaves and sell more stereo and hi-fi recordings.

Writing in the April 1960 *Reader's Digest,* Blake Clark says that ". . . when you sit down to enjoy almost any kind of (television) show, the chances are that you will find yourself suddenly confronted with actors gargling, swallowing pills, taking baths, or dropping their false teeth into cleansing fluid." He continues his all too true accounting of TV's bringing the bathroom into the living room by illustrating how "laxatives, deodorants, depilatories, toilet paper, corn removers, and sick headache remedies are among the most ubiquitous TV topics" of the day. About all that's left to promote in the health care field are do-it-yourself Caesarean section kits and psychotherapy-at-home recordings.

Uninhibited, unconscionable proprietary "health" product presentation to the American family is not only esthetically repugnant, it is downright dangerous. The "exclusive three layer tablet promoting drainage of all eight sinuses" may cause the unwitting to postpone proper diagnosis and care of serious sinusitis while the patent hoarseness lozenge temporarily may mask an esophageal malignancy—until it's too late. Admittedly, these are extremes, but they are not beyond the realm of possibility.

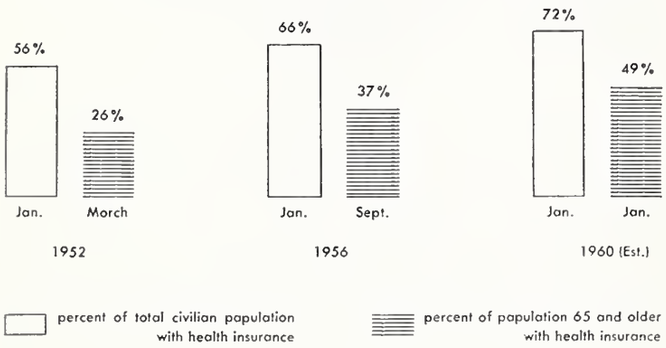
Since 1954, medical organization has urged video moguls to clean up the picture in the living room, but response has been minimal. Oh, they've taken the white coats and stethoscopes off the actors and occasionally flash a subliminal proclamation that the liver bile sequence is "a dramatization," but where one such evil may have been corrected, a dozen others have been none too subtly introduced. There can be little doubting that the alert networks—to the dollar, that is—have snapped up every active and latent opportunity in the nation's growing awareness of health and medical care.

Government control of any mass medium is undesirable and should be avoided. The telecasting industry already knows exactly how precarious its position is and this is all the more reason that rigorous voluntary controls must be instituted. Continued reticence could result in severe federal regulation. To delay self-policing is to invite further public disgust while showing a selfish disregard for health and good taste.—R. B. K.

The Facts vs. Forand

Vote hungry liberal office seekers in this year of grace and general elections are evincing considerably more concern for health needs of the aging than the seniors themselves. While Humphrey, Kennedy, and Symington decry the missile gap and medical practice, virtually half of America's over-65 citizens have quietly acquired health in-

Increasing Health Insurance Coverage For Aged



surance. Within the month, the Health Insurance Association of America said recent studies showed that 49 per cent of the nation's 15.7 million seniors are now covered against illness and injury. This is almost double the percentage covered in 1952.

A second bombshell dropped on the Forand fellowship is the HIAA finding that only 15 per cent or 2.4 million of the aging are actually indigent. Thus, the trend in health insurance coverage of the over-65 group is definitely up—and climbing—while indigency appears on the downgrade. Among the remaining 5.6 million there is a latent capability to provide or have provided for them by private means needed food, clothing, shelter, and medical care. It will be in this group that further gains in voluntary health plan coverage will be realized at an estimated rate more than half a million a year. This projected increase will more than pace the rate of over-65 population growth, too.

How are these astonishing gains being achieved? For the most part, insurance and prepayment organizations are warming up to enrollment potentials with new, imaginative approaches, realistic premium levels, and contracts that deliver what they promise. In 1952, only a fourth of the seniors had health insurance. By 1956, 37 per cent were covered. A University of Chicago study in 1958 found 43 per cent with voluntary hospital-physician benefits and the rate of growth since has been three per cent per year.

Health plans for the aged are accelerating volume-wise far ahead of those for the general population. In 1952 when one out of four seniors was covered, six out of every 10 Americans had some sort of health insurance. Today, with one of every two over-65 citizens insured against illness, the general population coverage has crept up only a notch to seven out of 10 persons. Actually, the rate of insurance purchase for all age categories will speed up because group sales are mounting and so are plans which permit employees to continue under company programs after retirement.

Stripped of emotion, liberal-welfare partisan palaver, and vote bait balderdash, the sheer economics of present medical care financing for the aging shows how patently unnecessary and wasteful federal programs are. These factual circumstances take no account of other equally factual contentions where it has been demonstrated that most seniors enjoy basically good health and that money income is not a valid measure of their true economic circumstance. Physicians must reinforce this positive trend by helping make health insurance work because every day that federalism is delayed is a day on which private endeavor grows.—R. B. K.

Mr. Kefauver and the Physician-Patient Relationship

Washington is a strange place where equally strange people are sometimes motivated to do the illogical but politically expedient—most especially when they are liberal senators like Estes Kefauver. The senior senator from Tennessee has only recently added to his doubtful record of achievement a new disservice to the physician-patient relationship.

Since last December, Mr. Kefauver's Senate Antitrust and Monopoly Subcommittee has put on a propaganda performance almost without precedent in the annuals of the senate—no mean accomplishment, to be sure. The hapless target has been the American pharmaceutical industry and its drug pricing practices. So far, the Kefauver inquisition has brought to light only those facts which demonstrate that the industry is a typical American business endeavor with a special dedication to the health of the nation. From quoted utterances, the good chairman, a self-styled champion of the "little people" is not particularly fond of this finding.

Although constituted to investigate pricing conspiracy, control of supply, and unlawful restraint of trade where such may exist, Mr. Kefauver got badly off the track last month and set the stage for a debate on the efficacy and safety of drugs. The case in point is the oral antidiabetic drug, chlorpropamide. Apparently unsatisfied with real or fancied aspects of its costs, the senator permitted testimony on appraisal of its usefulness in control of diabetes and side effects said to have been observed.

To be sure, all drugs should be evaluated meticulously for safety, efficacy, and over-all clinical performance. But there is a proper place for such evaluation and it's not in the halls of the United States senate before a committee of nonmedical persons. The net result of this unfortunate diatribe—whether intentional or accidental—can only undermine patient confidence in medical care. Disgusted with the Kefauver proceedings, Mr. John E. McKeen, president of Pfizer, wrote the committee suggesting that a scientific symposium on antidiabetic drugs be conducted and offered the resources of his company in co-sponsoring a free forum among qualified researchers, clinicians, and others competent to evaluate oral antidiabetic preparations.

Mr. McKeen's clincher was this: "If such a symposium is carried out, it will move technical discussions among medical men on the oral antidiabetic drugs back into the medical and scientific atmosphere where such discussion belongs."

The farce was brought to a screeching halt by the senate minority leader, Mr. Dirksen, who objected to continuation of the hearings—a unanimous consent is necessary for committee sessions during meetings of the senate. Let it be hoped that Mr. Dirksen and other mature, judicious members of the world's highest deliberative body will maintain its dignity by preventing further display of grossly improper methods in the investigating process.—R. B. K.

"It's Mrs. Brown again. . . . She wants to know how her rich uncle is getting along."

NEW FILMS

Radiation: Physician and Patient. Color, sound, showing time 45 minutes. Produced by the American College of Radiology and the U. S. Public Health Service. No charge for loan services. Order from Film Library, Mississippi State Board of Health, P.O. Box 1700, Jackson, Mississippi. For professional use only.

The use of x-ray by physician and hospitals is the central concern of this film. Radiological experts supply the background information regarding the dangers of excessive radiation. The technique for obtaining the best x-ray pictures with the least amount of exposure is demonstrated. A copy of the film has been furnished each state by the Public Health Service.

The Cancer Detection Examination. 16 mm., black and white, sound, showing time 46 minutes. Produced from a video tape of a closed circuit telecast by Eli Lilly Company in cooperation with the American Cancer Society, New Jersey Division, Inc. No charge for use, delivery, or return of the film or for the accompanying audience booklets. For qualified physicians' groups only. Order at least 30 days in advance from Eli Lilly and Company, P.O. Box 814, Indianapolis 6, Indiana.

"Early diagnosis for good prognosis," is the essential point of the film. Dr. Emerson Day, director of the Strang Cancer Detection Clinic, Memorial Center, New York, demonstrates the highlights of a routine presymptomatic cancer detection examination.

The procedures described in the film can easily be followed in the office of the private practitioner. According to Dr. Day, "It is here (the office) that the greatest number of potential cancer cases are encountered. Indeed, the ultimate success of the entire cancer control program will depend upon the family physician, since it is to him that the average patient first takes his health problems."

A handbook provided with the film outlines the complete examination shown in the motion picture, including necessary procedures that could not be covered.

Book Reviews

Surgery in World War II—Neurosurgery, Volume II. Edited by R. Glen Spurling, M.D., and Barnes Woodhall, M.D. Leather, 705 pages with 283 illustrations, 12 colored plates, and 15 tables. Office of the Surgeon General, Department of the Army, Washington, D. C., 1959. $7.00.

This book compiles the World War II experiences of 20 well-known, outstanding men in the fields of neurosurgery, orthopedics and urology. The report is divided into two major parts: spinal injuries and peripheral nerve injuries.

In contrast to World War I, at which time the paraplegic patient was treated with a defeatist attitude, there was a marked change in philosophy and objective during World War II. The following quotation reflects the point of view adopted by the armed service in World War II: "After the warning that a defeatist attitude was intolerable in the care of patients with transverse myelitis, it was pointed out that the majority of these men could lead a wheelchair existence, at least; that practically all of them could achieve self-support by means of some sedentary occupation, which should be regarded as the ultimate objective of all rehabilitation."

It was further emphasized that it was the mission of general hospitals in the Zone of Interior to effect, before the final discharge of a paraplegic, a degree of rehabilitation for him "essential for the preservation of morale and human dignity." In accord with this orientation, two primary aspects of the over-all problem were considered essential: 1. An administrative organization to coordinate the activities of various medical and administrative services in order to effectively and efficiently rehabilitate the spinal cord injured patient to a useful life. 2. Several teams of well-trained physicians, nurses, physiotherapists, technicians, and nurses-aides with an intense desire to help the spinal cord injured patient both mentally and physically.

Five hospitals, strategically located in the Zone of Interior, were designated as paraplegic centers. The same general medical treatment was followed at all the centers. Prevention of decubitus ulcers was accomplished by turning the patient every two to three hours. Patients were placed on Stryker frames when available. Decubitus ulcers were treated by keeping them clean and resecting necrotic tissue and utilizing split thickness or pedicle skin grafts as soon as practical. Maintenance of satisfactory nutritional status was recognized as being a major problem, especially in patients with decubitus ulcers. A caloric intake of 3,200 calories was instituted. The protein intake was between 150 and 175 g. per day.

Urinary bladder care was also an important factor since stones invariably developed and were the most frequent complication. Prevention of stones was attempted by frequent irrigation and high fluid intake, over 4,000 cc. per day. Sulfanilamide compounds and penicillin were instituted for prevention and treatment of urinary infection. A continuous catheter drainage was started immediately after an injury. For incomplete cord injuries the catheter could be removed after a few weeks. Tidal drainage for developing an automatic bladder was instituted when practical but was not thought to be essential. Bowel activities were maintained by enemas every second day and one ounce of mineral oil every evening.

The surgical policy in the treatment of spinal cord injuries was to give all patients with interrupted function of the spinal cord the benefit of proper exploration. In gunshot wounds of the spine, the vertebral arches were often fractured and spicules of bone driven into the cord. The dura was not opened unless there was evidence of a tear or bony spicule projecting through it.

Rehabilitation of the paraplegic patient was done by strengthening whatever functioning muscles were available and by fitting the patient with braces to enable walking.

The second part of the text deals with peripheral nerve injuries. It was first realized that combined teamwork between neurosurgeons, orthopedic and plastic surgeons gave the best results. Diagnostic procedures used for the detection of nerve injuries consisted of muscle, motor and sensory evaluation, electrical stimulation, and skin resistance and sweating tests. Detailed surgical anatomy of peripheral nerves is well discussed. Repair of peripheral nerve injuries as soon as possible after an injury gave the best prognosis. Attempts were made to repair a nerve within three to twelve weeks after injury. A peripheral nerve registry was established for the completion of a follow-up of each patient. Twelve peripheral nerve centers were established. Follow-up was done for at least one year although it was recognized that this was not sufficient time to evaluate the com-

plete function of a nerve. Detailed tables with statistical analysis of the nerve injuries were tabulated in the appendix.

Policy of treatment at the time of injury was to identify the lesion and to fix the nerve to the subcutaneous tissue without stretching it. Temporarily bringing the nerves together was not effective because fibrosis became more extensive at the ends and resulted in a greater gap during the final repair. Tantalum wire sutures were used to fix the epineurium of the nerve to the surrounding tissue. The nerve was then covered with a belly of muscle or subcutaneous tissue fat. During the definitive repair the distal nerve end was resected until normal fascicles projected from the ends. The proximal end was then resected until normal fascicles appeared. Varying types of suture material were employed. End-to-end anastomosis with interrupted epineural stitches was utilized.

In order to reduce tension at the suture line the limbs were placed in an optimum position for relaxation of the nerve and maintained for a period of several weeks. After approximately two weeks the limb was slowly extended over a period of three weeks so that at the end of five weeks it had attained complete extension. With this technique of mobilization, approximately 2 per cent of the suture lines became disrupted and little difficulty was encountered with joint fixation. Evidence of regeneration of function occurred between six and twelve months after repair.

In compound nerve and bone injuries, it was found best to treat the patient simultaneously for both the bone and the nerve injury. In some instances it was possible to treat the nerve injury first and leave the bone repair until three months later. Combined vascular and nerve interruption often revealed the vascular injury to be much more pronounced than the nerve injury. Aneurysms occasionally developed at the site of injury and secondarily produced trauma to the nerves.

Physiotherapy to the extremities was found to be a very important aspect of the restitution of function. This was done with direct electrical stimulation of muscles, active and passive movement. Transplantation of various tendons was instituted in cases which had irreparable nerve injuries. Nerve grafts are discussed and reported as being unsuccessful.

In general, this book is a detailed and important document of neurosurgical experiences during World War II in the treatment and rehabilitation of war casualties having spinal cord and peripheral nerve injuries. It is a definite "must" in the reading of a military neurosurgeon. The average practitioner and even the general surgeon in a busy practice would be discouraged in plowing through the repetitious details presented in this text. In contrast, the neurosurgeon in private practice will find this text an excellent reference for the management of spinal cord and peripheral nerve injuries.

O. J. Andy, M.D.

"It doesn't have any specific side effects. It just cures them or kills them."

Clinical Management of Behavior Disorders in Children. By Harry Bakwin, M.D., professor of clinical pediatrics, New York University, and Ruth Morris Bakwin, M.D., associate professor of clinical pediatrics, New York University. Second edition. Cloth, 597 pages. Philadelphia: W. B. Saunders Company, 1960. $11.00.

This second edition of Bakwin and Bakwin's well-established work has been considerably enlarged. The excellent organization of the first edition has been retained and much valuable new material has been incorporated into the various chapters. Chapters on manic depressive disease and hysteria have been added. Mental functioning and early infantile autism have been given separate chapters and a discussion of the emotional factors in duodenal ulcer have been added to the section on organic disturbances with a large psychic component.

The chapter on hospital care is excellent and should be required reading for all persons who are or may be responsible for such care.

Valuable features of the work are the lists of books recommended for parents and the suggested sources of information for parents of handicapped children.

The general approach to the mechanisms of emotional disturbance seems somewhat superficial.

In some cases, the predicted result of recommended treatment is excessively optimistic. The valuable contributions of psychoanalysis are, in general, ignored. The name of Anna Freud is not found in the author index, while 39 page references follow the name of Lauretta Bender, more than any author except Gesell.

The discussion of masturbation may be productive of harm. The authors seem to be unable to decide how it should be regarded. The questionable views of older writers are prominently and uncritically presented. The considerable space devoted to treatment is inconsistent with the repeated assurance that the practice is harmless and will eventually be spontaneously abandoned.

In spite of its defects, the book will be a valuable addition to the library of any physician whose patients include children, and it is an excellent reference for medical students and nurses.

H. C. Ricks, Jr., M.D.

Domestic Journals

Placebo Response in Schizophrenic Outpatients. Leon D. Hankoff; David M. Englenardt; and Norbert Freedman: A.M.A. Arch. Gen. Psychiatry 2:33-41 (Jan.) 1960.

There has been much recent interest in the behavior of individuals toward placebos. The authors of this article repeatedly call attention to the complexity of the subject once one attempts to study it systematically, mentioning the reported development of dermatitis medicamentosa associated with placebo ingestion and also a report of Fischer and Din that results were poorer in patients under psychotherapy when placebos were added to the treatment. Dr. Raymond F. Grenfell (J. Miss. St. Med. A. 1:235-238 (April) 1960) has reported that hypertensive patients receiving placebos in a double blind study felt more relaxed. Headache, dizziness, and throbbing of blood vessels of the head decreased, but there was no significant change in systolic or diastolic blood pressure with oral administration. However, with parenteral placebo both systolic and diastolic blood pressures dropped for protracted periods (months).

The authors of this paper report their study of 103 schizophrenic patients in outpatient treatment employing ataractic drugs and placebos. A placebo response was defined as a change in the patient's response (either improvement or worsening) attributable to the placebo. Placebos were given over a three week period along with psychotherapy by the same doctors who would continue with the subject over subsequent weeks on an ataractic-psychotherapy regime. Forty-two patients responded favorably, 20 unfavorably, and 41 exhibited no change to the placebo according to the criteria used.

The interesting finding was that in the subsequent course of these patients those who responded unfavorably to placebos were unfavorable responders to ataractic treatment, while in general the successes with the continued ataractic drug program were recruited from the positive responders to placebo. Positive end-results were also correlated with the patient's being a post-hospital follow-up case as contrasted with the patients admitted by direct referral to the outpatient clinic. Positive response was also seen more often in those patients in whom "denial" (of being mentally ill) was a conspicuous mechanism.

Thus, the placebo response in the patients in this study was felt to be related to a matrix of factors both antecedent and resulting from treatment and to have some predictive, prognostic value. This "single blind" study with only a short period on the placebos might have been even more illuminating had the period on the placebo been longer and the program a "double blind" one. It is an interesting study now that physicians are seeing more and more mental hospital discharges in their offices, and it serves to show that placebo response is a complex phenomenon involving many factors.

Floy Jack Moore, M.D.

Exfoliative Cytology During Pregnancy for the Detection of Carcinoma of the Cervix. Harlan J. Spujt; Walter A. Ruch, Jr.; Patricia A. Martin; and Don E. Hobbs: Obst. and Gynec. 15:19 (Jan.) 1960.

The authors have presented the results of systematic testing of antepartal patients by means of the Papanicolaou smears. A total of 3,352 smears were taken from 3,300 pregnant women by cervical scrapings, from the vaginal pool, and in addition many of the patients had an endocervical smear. The patients were routine antepartal patients seen in the clinics of Washington University School of Medicine and Barnes Hospital in St. Louis. None of the patients in the group was clinically suspected of having a carcinoma. Follow-up studies on these patients were done by means of four quadrant biopsy, or Gusberg ring biopsy. In a few instances, superficial conization on hospitalized pregnant patients was carried out. Complications from biopsy techniques were con-

fined to bleeding which was readily controlled by pressure against the biopsy site.

From the examination of these 3,300 women, a total of 23 with positive or suspicious smears were found. Five patients had positive smears, the remainder were suspicious. In the five patients with positive smears, four were proved by biopsy technique to have carcinoma in situ; the fifth patient showed atypical hyperplasia. Repeat studies eight months postpartum continued to show atypical hyperplasia. Of the remaining 18 patients, five were diagnosed as having chronic cervicitis with squamous metaplasia. Ten of the patients had atypical hyperplasia of the cervix with four of these regarded as borderline for carcinoma in situ. The three remaining patients with suspicious smears were proven by biopsy techniques to have carcinoma in situ. Two false negative smears are so far known to the investigators. Both of these patients had smears which were read as negative for cancer during pregnancy. Subsequent investigation proved one patient to have a disgerminoma of the ovary. The remaining patient with a single negative smear during pregnancy was five months later investigated by biopsy because of cervical erosion. This biopsy revealed carcinoma in situ.

The authors stress the importance of following up atypical exfoliated cells with diagnostic biopsy.

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"Now, don't just take this home and set it on the shelf."

The point is also well made that biopsy should not be deferred to the postpartum period since some of their patients were lost to follow-up for periods of up to seven months because of this policy. They recommend that routine cervical and vaginal smears be part of the examination and evaluation of every pregnant woman.

LOIS M. MOSEY, M.D.

Fetal Damage From Rubella During Pregnancy. J. H. Mullins, J. A. Farris, and J. K. Atkinson: Obst. and Gynec. 15:320 (March) 1960.

The incidence of congenital anomalies resulting from rubella acquired by the mother during the first three months of pregnancy has been reported to be as low as 10 to 12 per cent and as high as 79 per cent. These anomalies have included congenital cataracts, congenital heart defects, patent ductus, deafness, harelip, cleft palate, hydrocephalus, microcephalus, and mental retardation.

Fetal damage resulting from rubella infection in their private obstetrical patients was studied by Mullins, Farris, and Atkinson. A severe epidemic of rubella occurred in Baton Rouge in 1958 and produced the disease in 22 of their gravid patients. All of these patients had positive physician diagnoses of rubella and were followed carefully throughout pregnancy and delivery. No therapeutic abortions were performed and patients reporting exposure to rubella were given 10 cc. of immune serum globulin (human). Two patients receiving globulin developed rubella—one in 48 hours and one in four weeks.

Ten of the 13 patients developing rubella within the first eight weeks of pregnancy produced infants with serious fetal malformations or stillborns. Of the three babies who were apparently normal at birth, one experienced repeated convulsive seizures and another splenomegaly, hepatomegaly, and jaundice. Three patients developed rubella during the eighth to twelfth week of gestation producing two apparently unaffected infants and one infant with major congenital anomalies. No detectable anomalies were found in the infants of eight gravidas experiencing rubella after the twelfth week of gestation.

In this series the incidence of serious anomalies, stillborns, or abortions was 77 per cent if the mother had rubella during the first eight weeks of pregnancy.

Reviewer's Comment: The series is small and the virus may have been of unusual potency. However, this profound fetal damage and wastage cannot be ignored.

W. B. INMON, M.D.

MEETINGS

NATIONAL AND REGIONAL

American Medical Association, June 13-17, 1960, Miami Beach. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago 10, Ill.

American College of Surgeons, October 10-14, 1960, San Francisco. William E. Adams, Secretary, 40 E. Erie St., Chicago 11, Ill.

Southern Medical Association, October 31-November 3, 1960, St. Louis. Mr. V. O. Foster, Executive Secretary, 2601 Highland Ave., Birmingham 5, Ala.

Gulf Coast Clinical Society, October 12-13, 1960, Biloxi, Mississippi. George W. Rogers, Secretary, P. O. Box 37, Handsboro, Miss.

STATE AND LOCAL

Mississippi State Medical Association, May 9-11, 1961, Biloxi. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson, Miss.

Mississippi Academy of General Practice, September 28-29, 1960, Jackson. Miss Louise Lacey, Executive Secretary, Walthall Hotel, Jackson, Miss.

Amite-Wilkinson Counties Medical Society, First Tuesday March, June, September, December. S. E. Field, Centreville, Miss., Secretary.

Central Medical Society, First Tuesday Monthly, 6:30 p.m., Robert E. Lee Hotel, Jackson, Miss. C. G. Sutherland, 918 N. State St., Jackson, Miss., Secretary.

Claiborne County Medical Society. D. M. Segrest, Port Gibson, Miss., Secretary.

Clarksdale and Six Counties Medical Society, Fourth Wednesday March and September, 2:00 p.m., Clarksdale, Miss. Robert R. McGee, 150 Yazoo St., Clarksdale, Miss., Secretary.

Coast Counties Medical Society, First Wednesday March, June, September, and November. Charles N. Floyd, 1412-23rd Ave., Gulfport, Miss., Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Miss., Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando, Miss. L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Miss., Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Monthly, 7:30 p.m., Natchez Country Club, Natchez, Miss. W. T. Colbert, 539 Park Place, Natchez, Miss., Secretary.

North Central District Medical Society, Second Wednesday March and September. W. A. Middleton, 214 Summit St., Winona, Miss., Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December, Tupelo, Miss. Eugene M. Murphey, III, 421 Main St., Tupelo, Miss., Secretary.

North Mississippi Medical Society, First Thursday January, April, and October, Oxford, Miss. R. L. Wyatt, Holly Springs, Miss., Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. George B. Stewart, 215 Kirkwood St., Picayune, Miss., Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. Thomas F. Puckett, 715 Arledge St., Hattiesburg, Miss., Secretary.

Tri-County Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Miss., Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg, Miss. Thomas H. Mitchell, The Street Clinic, Vicksburg, Miss., Secretary.

TEXAS HEALTH

The healthiest town in the world—naturally—is in Texas. There, they have no need for a hospital and the drug store has no prescription department. In fact, they couldn't even start a cemetery until the local doctor died of starvation.

Flying Physicians, Forand, Fungi Inv lved in Annual Session; 1100 Doctors, Families, Guests Attend 4 Day Convention

Flying physicians, Forand, and fungi all had their place as Mississippi's medical men attended their 92nd Annual Session May 10-12 in Jackson.

Approximately 1100 physicians, their families and guests gathered at the Hotel Heidelberg and King Edward Hotel for four days of scientific study, politics, and fellowship.

Getting a jump on the rest of the convention, members of 10 specialty societies and three alumni groups met Monday, May 9. The opening of registration Monday afternoon signaled the beginning of activity, and the annual session was in full swing by Tuesday morning.

Setting the pace for Tuesday's events, Dr. E. Vincent Askey, AMA president-elect, told an open session of the House of Delegates that Forand-type legislation (providing medical care for the aged under the social security program) is "a gimmick to garner votes, to get elected and to stay in office."

Said Askey, "Forand legislation is government medicine. It is political medicine. It is socialized medicine, although temporarily limited in scope. Such programs . . . once on the books . . . always expand. They never contract."

His comment on Mississippi action: "I congratulate your various organizations which are using the community approach without paternalistic direction of federal planners to work out such projects as retirement villages, rehabilitation and convalescent programs, and special training for persons caring for the aged. You are demonstrating that destructive social legislation can best be defeated by a negative approach to the legislation."

During the open session, Dr. B. B. O'Mara, Biloxi, vice speaker, gave the Distinguished Service Oration. Subject this year was Dr. Henry Boswell, founder and superintendent of the Mississippi State Tuberculosis Sanatorium at Magee from 1917 until his death in 1957. O'Mara described Boswell as "an humble man who walked big and tall among his fellowmen with a tread so soft that the lightest slumber was undisturbed."

Boswell became interested in public health when he contracted tuberculosis in 1910. During his stay in an El Paso sanatorium, he became acquainted with a physician in the advanced stages of T.B. This physician exacted a promise from Boswell that he would devote his life to the eradication of tuberculosis.

In 1911 Boswell became Mississippi's first full time public health field worker. During his almost half century of health work, he saw the T.B. death rate drop from 139.8 per 100,000 to 7.9.

At the conclusion of O'Mara's talk, aerial views of the Sanatorium were presented to Mrs. Henry Boswell and Dr. Clyde A. Watkins, Sanatorium superintendent.

Speaking to the Tuesday session of the House of Delegates, MSMA President Stanley A. Hill warned that the cost of operating the state's medical school may outgrow the ability of the state to support it.

Said Hill, "The state of Mississippi is in a strain to provide operating funds for the medical school. It is not practical to obtain research buildings without operating funds for the university medical center."

The recent session of the Mississippi Legislature approved $1,500,000 in bonds as matching funds for a $3 million research wing.

Hill called upon the doctors to build a sizeable endowment for the University of Mississippi School of Medicine to assure its remaining adequately supported.

Other Tuesday events were the meetings of the Fifty Year Club, two scientific sections, three specialty societies, and three alumni groups.

All in favor of socializing as long as legislation isn't concerned, the doctors climaxed Wednesday's activities with the annual banquet-dance in the King Edward Crown-Coronet Ballroom.

As master of ceremonies, Dr. William E. Lotterhos, Jackson, general chairman of the annual session, announced the awards and prizes during the banquet. Golf prizes were given to Dr. Willard H. Boggan, Jackson, low gross, and Dr. Hal Cleveland, Gulfport, low net. Door prizes went to Mrs. Lucien R. Hodges, Jackson, Dr. A. L.

(Turn to page 335)

House of Delegates in session.

DOCTORS LEGISLATE, STUDY, PARTY . . .

1960 Technical Exhibit located in Victory Room, Hotel Heidelberg, features more than 55 exhibits by ethical, established firms.

Dr. Lawrence W. Long, speaker, presides over House. Also on rostrum are Kennedy, Lotterhos, McClanahan, O'Mara, Hicks and Hill.

MSMA past presidents take time to pose for photographer during their Wednesday morning breakfast.

Left: MSMA leaders shake hands over gavel. They are (left to right) Dr. Lawrence W. Long, Jackson, president-elect; Dr. G. Swink Hicks, Natchez, president; and Dr. Stanley A. Hill, past president. Right: Dr. Edwin H. Lawson, New Orleans, president of the Southern Medical Association (center) makes awards to two Mississippians. Dr. Harvey Garrison, Sr., Jackson (left), was given a certificate of appreciation and an honorary membership in SMA. Rowland B. Kennedy, MSMA executive secretary (right), was made an associate member of the organization.

. . . DURING 92ND ANNUAL SESSION

Doctors register for 92nd Annual Session. Mrs. Pat Horne and Mrs. Jo Ingram are manning the desk.

Dr. Askey—AMA president-elect

Mrs. Thompson—Auxiliary past president

Mrs. Egger—Auxiliary president-

. . . FOUR DAYS OF ESSAYS, EXHIBITS, FUN

Dr. G. Swink Hicks' family joins him on rostrum after his inauguration as president of the Mississippi State Medical Association.

High school essay winners receive checks from MSMA officials. Left to right are Dr. Stanley A. Hill, Jake McInnis, Jane Brown, and Dr. Robert J. Moorhead.

Thaggard, Madden, and Dr. T. N. Braddock, Jr., West Point.

Dr. W. B. Inmon, and Dr. Winfred Wiser, Jackson, won the Gold Medal Award for their scientific exhibit on "Mediolateral Episiotomy." Honorable mentions went to Dr. J. T. Davis, Corinth, for his exhibit on "Nerve Injuries of the Hand" and Dr. William O. Barnett, Jackson, for his exhibit on "Unusual Causes of Intestinal Obstruction."

Other Wednesday activity included meetings of the Flying Physicians, the Past Presidents' and sections on medicine, EENT, and preventive medicine.

During the meetings of the six scientific sections, approximately 36 speakers spoke on subjects ranging from leukemia to cosmetic surgery. New section officers for the 93rd Annual Session are:

Obstetrics and Gynecology—Carl E. Lewis, Jackson, chairman; Michael Newton, Jackson, secretary.

Pediatrics—Wilfred Q. Cole, Jackson, chairman; H. C. Ricks, Jr., Jackson, secretary.

Medicine—Eugene M. Murphy, Tupelo, chairman; George Spencer Barnes, Columbus, secretary.

Eye, Ear, Nose, and Throat—Reuben H. McArthur, Jr., Jackson, chairman; Samuel G. Mounger, Greenwood, secretary.

Preventive Medicine—A. N. Morphy, Gulfport, chairman; P. T. Howell, Forest, secretary.

Surgery—J. T. Davis, Corinth, chairman; James T. Thompson, Moss Point, secretary.

As the convention rolled into its fourth and last day, Mississippi members of the Southern Medical Association met for breakfast and a brief business session. Rowland B. Kennedy, MSMA executive secretary, was made an associate member of SMA in "recognition of meritorious service rendered the medical profession and humanity."

Dr. Harvey Garrison, Sr., Jackson, was awarded a certificate of appreciation and made an honorary member of Southern Medical for his service to the organization. Dr. Garrison has been president of SMA and a member of the Board of Trustees.

Dr. James M. Hood, Houlka, was also made an honorary member of Southern Medical. His wife accepted the certificate in his absence.

Dr. Edwin H. Lawson, New Orleans, president of SMA, made the presentations.

Climax of the 92nd Annual Session came Thursday afternoon as representatives of the 1300 MSMA members gathered for the closing session of the House of Delegates to pass on resolutions and elect officers.

During this session, winning state essayists on the subject "Advantages of Private Practice of Medicine" were presented to the House of Delegates. First prize in the high school contest sponsored by MSMA, the Woman's Auxiliary, and the Association of Physicians and Surgeons went to Jane Brown, Gulfport. Miss Brown placed 12th in national competition.

Jake McInnis, Hattiesburg, placed second and August Kiperts, Holly Springs, third.

Following the inauguration of Dr. G. Swink Hicks as president, the 92nd Annual Session was adjourned. The 93rd Annual Session has been scheduled for May 9-11, 1961, at the Buena Vista Hotel, Biloxi.

Delegates Hear Reports, Consider Resolutions

Almost 30 annual reports and six resolutions put Mississippi medicine's legislative and policy-making body, the House of Delegates, on a maximum effort basis during two full days of activity during the annual session. Presentation of business occurred during the first meeting on May 10 after which seven busy reference committees heard debate through the following day.

Presiding over the delegates' deliberations were Dr. Lawrence W. Long, Jackson, speaker, and Dr. B. B. O'Mara, Biloxi, vice speaker. The meeting series was opened by Dr. Stanley A. Hill, Corinth, president, and closed by Dr. G. Swink Hicks, Natchez, 1960-61 president, immediately following his inauguration by the chairman of the Board of Trustees, Dr. H. H. McClanahan, Jr., Columbus.

Both general meetings of the house were heavily attended with every MSMA component medical society represented. Tuesday highlights included the president's address, Distinguished Service Oration, and the address of the AMA president-elect, Dr. E. Vincent Askey, Los Angeles.

Final action on reports and resolutions came with reference committee reportings May 12. Action highlights were varied as the house—

Commended the new JOURNAL MSMA and reorganized the Committee on Publications as a constitutional arm of the Board of Trustees,

Accorded delegate status to physician-members of the State Board of Health and Board of Trustees of Mental Institutions,

Created a seventh formal scientific branch of the association, the Section on General Practice,

Ordered a full dress study of criteria for sterilization procedures for other then medically indicated reasons, asking that suitable guides be prepared for physicians and hospital staff organizations,

Reaffirmed strongly MSMA's position that the workmen's compensation act should contain clear and unmistakable definitions of " . . . injury, accident, pre-existing condition, and occupational disease," expressing the belief that medical disease should be regarded in a true scientific context and not as injury by accidental means,

Asked the Mississippi Air National Guard to tighten regulations on so-called "mercy missions" for transportation of the acutely ill, especially cardiac patients, to distant treatment centers by military aircraft,

Directed that an overall study be initiated as to blood banking facilities, supply sources, and blood distribution policy,

Reendorsed the program of the Committee on Aging and authorized new activities in this important area,

Voted unanimously for the third consecutive year to oppose all Forand-type legislation as unnecessary and wasteful,

Adopted the uniform health insurance claim form sponsored by the Health Insurance Council,

Approved expansion of the Central Office Headquarters Building initiated last year,

Endorsed the Board of Trustees' new voluntary retirement plan based on Keogh-type legislation and a tentative trust agreement with the Deposit Guaranty Bank of Jackson, and

Urged the University of Mississippi School of Medicine to organize ". . . a true department of general practice."

Long Named President-elect; Hicks Succeeds Hill

Dr. Lawrence W. Long, Jackson, was named president-elect of MSMA May 12 during the finale of the 92nd Annual Session—the closing meeting of the House of Delegates.

A staunch supporter of Mississippi medical organization, Long served this past year as speaker of the house, and chairman of the publications committee and the council on medical service.

Dr. G. Swink Hicks, Natchez, succeeded Dr. Stanley A. Hill, Corinth, as president under the association's promotion plan.

In an unusual chain of elections and resignations, Long gave up the post of speaker of the house in order to accept the president-elect position. Biloxi physician, Dr. B. B. O'Mara was named to succeed him and in turn retired as vice speaker of the House. Dr. Howard Nelson, Greenwood, was chosen new vice speaker.

MSMA vice presidents named at the same time are Dr. Frank M. Davis, Corinth, northern district; Dr. Jack V. King, Jackson, mid-state district; and Dr. Charles R. Jenkins, Laurel, southern district.

Other physicians named to offices as the association closed its four day meeting are:

Editor, JOURNAL MSMA, Thomas J. Marland, Jackson; associate editor, Moncure Dabney, Crystal Springs; associate editor (for unexpired term), J. Harvey Johnston, Jr., Jackson.

Delegate to AMA, John F. Lucas, Greenville; alternate delegate to AMA, George E. Twente, Jackson.

Board of Trustees: C. P. Crenshaw, Jr., Collins, district 7; Everett H. Crawford, Tylertown, district 8; C. D. Taylor, Jr., Pass Christian, district 9.

Judicial Council: Samuel B. Caruthers, Grenada, district 4; George H. Martin, Vicksburg, district 5; Omar Simmons, Newton, district 6.

Council on Budget and Finance, W. K. Purks, Vicksburg; Council on Constitution and By-Laws, E. LeRoy Wilkins, Clarksdale; Council on Legislation, William E. Lotterhos, Jackson; Council on Medical Education, Temple Ainsworth, Jackson.

Council on Medical Service: Frank M. Acree, Greenville, district 1; Joseph B. Rogers, Oxford, district 2; M. Q. Ewing, Amory, district 3.

Council on Socioeconomic Affairs: Mal S. Riddell, Jr., Winona, district 4; Carl D. Brannan, Jackson, district 5; C. B. Mitchell, Jr., Meridian, district 6.

Blue Cross-Blue Shield Directors: William N. Crowson, Clarksdale; A. L. Gray, Jackson; Lamar Arrington, Meridian; Eugene A. Trudeau, Biloxi.

Fraternal delegates: John W. Hunter, Meridian, to Alabama; C. W. Patterson, Rosedale, to Arkansas; A. V. Beacham, Magnolia, to Louisiana; J. T. Davis, Corinth, to Tennessee.

Woman's Auxiliary Holds 37th Annual Session

Meeting concurrently with MSMA's 92nd Annual Session, the Woman's Auxiliary to the Mississippi State Medical Association opened its 37th Annual Session May 9 at the King Edward Hotel, Jackson.

While their husbands debated Forand and cancer causes, Auxiliary members heard national leaders and considered the latest fashions suitable for doctors' wives.

Auxiliary activity opened Tuesday, May 10 with a breakfast given by Mrs. James T. Thompson, Moss Point, president. During the following general session, Mrs. John Egger, Drew, was chosen president-elect. Mrs. Lee Reid succeeded Mrs. Thompson as president.

Other officers named at this time are: Mrs. Wendell Holmes, McComb, recording secretary; Mrs. J. D. Simmons, Cleveland, treasurer; Mrs. F. E. McCullough, Jackson, corresponding secretary.

Mrs. James T. Thompson, Moss Point, first vice president; Mrs. A. T. Tatum, Petal, second vice president; Mrs. Eldon Bolton, Biloxi, third vice president, Mrs. Richard Riley, Meridian, fourth vice president.

Mrs. S. Lamar Bailey, Kosciusko, parliamentarian; Mrs. T. A. Baines, historian.

Highlight of Tuesday's activity was a luncheon honoring Mrs. Frank Gastineau, president, Woman's Auxiliary to the AMA. Mrs. Gastineau made the luncheon address and installed the new officers.

In accepting the position of president, Mrs. Lee Reid said, "We are not now nor will we ever be a one-woman organization. Our founding concept is that of a team: First as a family unit with our physician-husbands and secondly, as an organizational unit in our role of supporting our Mississippi State Medical Association."

She concluded, "As Auxiliary members, we need not be able to remove an appendix, but we ought to be able to act in behalf of a system which permits the patient to choose the doctor who takes it out."

Wednesday activity included a past president's breakfast and a coffee and fashion show.

Mathews Joins MSMA Staff

Charles L. Mathews, Jackson, has been appointed to the newly established position of assistant executive secretary of the Mississippi State Medical Association. The announcement was made to the House of Delegates of the 92nd Annual Session by Dr. H. H. McClanahan, chairman of the Board of Trustees.

MSMA's Board of Trustees authorized the new staff position during its January 28, 1960, meeting. Mathews was recommended by Kennedy, appointed by the Board, and endorsed by the House of Delegates.

Since his graduation from Louisiana State University in January 1960, Mathews has been employed by the First Mississippi Corporation in Jackson. His work at L.S.U. included one year of graduate study in the School of Law.

Prior to entering L.S.U., Mathews served with the Army Security Agency during 1952-55. He withdrew from college in 1956 to work a year with the Dow Chemical Company.

MSMA Executive Secretary Rowland B. Kennedy introduces Charles L. Mathews, left, newly appointed assistant executive secretary, to the closing session of the House of Delegates, offering association's congratulations.

A native of Jackson, Mathews was born on March 1, 1933, the son of the late Clyde H. Mathews and Mrs. Vivian Collins Mathews. He is married to the former Phoebe Quaintance of Silver Spring, Maryland. They have one child, Charles L. Mathews, Jr., three years old.

AMA Invites Scientific Exhibit Applications

Application forms are now available for space in the Scientific Exhibit at the Washington, D. C. Clinical Meeting of the American Medical Association. The meeting will be held November 28 to December 1.

The forms may be procured by writing directly to Charles H. Bramlitt, M.D., director, Department of Scientific Assembly, American Medical Association, 535 N. Dearborn St., Chicago 10, Illinois. Applications close on August 1.

Medicare Program Costs $200 Million in 3 Years

The Medicare Program has cost over $200 million in three years, according to the May *New Medical Materia.*

Using figures from the Office for Dependents' Medical Care, the magazine calculated that 51 per cent of the money went to physicians and 49 per cent to hospitals. Average cost per patient was $250.

Of 800,000 cases handled, 60 per cent were obstetrical, 21.2 per cent were medical, and 18.8 per cent were surgical. From October 1, 1958, to September 31, 1959, Medicare-MSMA handled 4,734 cases. Out of these 39.5 per cent were obstetrical, 39.8 per cent were medical and 20.7 per cent were surgical.

New Medical Materia forecast that by 1964, Medicare will handle 423,000 cases a year.

AMA Warns Against Doctors' Nurses Association

In a letter to state and county executive secretaries, AMA warns against an organization called the American Association of Doctors' Nurses.

Most recent violation of group: a news release stating that AMA will loan a part of its large collection of exhibits for the "Doctors' Nurses" convention in Miami June 23 to 26. AMA states no exhibits have been loaned.

Under various aliases, the organization has written a rather notorious history. Florida, 1958: known as the American Registry of Doctors' Nurses it mailed promotional materials from Marianna—was said to be in violation of the Nurses Practices Act by the Attorney General.

Washington, D. C., summer, 1959: still sporting the same nom de guerre, the group consented to a Federal Trade Commission order that it stop misrepresenting itself as a nonprofit organization.

Said FTC: The company creates the false impression that it is a nonprofit organization of professional nurses when it is purely and simply a money-making operation conducted to sell memberships, certificates, pins, emblems, and other insignia.

Not to be daunted, the company is now trying again. Under the slightly modified title, the American Association of Doctors' Nurses, the group has announced in news releases that it is "assuming the membership of the old American Registry of Doctors' Nurses."

Most interesting statement: "A *Doctors' Nurse* must be able to qualify as an experienced *Doctors' Nurse* in order to become a member. . . ."

Latest release claims members in 48 states, Puerto Rico, and the Republic of Panama. However, the exact number of members is conspicuously absent.

Research Applications Invited by AHA

Applications from research investigators for support of studies to be conducted during the fiscal year beginning July 1, 1961, are now being accepted by the American Heart Association.

The deadline for applying for research fellowships and established investigatorships is September 15, 1960. Applications for grants-in-aid must be received by November 1, 1960.

Further information and application forms regarding research awards may be obtained from the Assistant Medical Director for Research, American Heart Association, 44 East 23rd Street, New York 10, N. Y.

Hospital Commission Sets New Policy

The Mississippi Commission on Hospital Care has announced that accreditation by the Joint Commission on Accreditation of Hospitals will be an important factor in determining future allotments for hospital additions.

The new policy states, "The Commission believes it to be to the best interest of hospitals and patients that all hospitals, which are eligible, should undertake to qualify for accreditation by the Joint Commission on Accreditation of Hospitals, and in considering applications for grants to provide additions to hospitals, the Commission will consider such accreditation, or the lack of it, as a material factor."

The Joint Commission is composed of 20 representatives: seven from the American Medical Association and the American Hospital Association, and three from the American College of Surgeons and the American College of Physicians.

JCAH surveys only state licensed hospitals which have invited its inspection. In Mississippi, 26 hospitals in 20 cities are accredited. These include institutions at Booneville, Clarksdale, Corinth, Greenwood, Grenada, Gulfport, Hazlehurst, Holly Springs, Laurel, Meridian, Pascagoula, Sanatorium, Starkville, Tupelo, Yazoo City, two hospitals each in Columbus, Greenville, Hattiesburg, Vicksburg, and three institutions at Jackson.

The Joint Commission's program does not conflict with the inspection and licensing of hospitals required by state law and administered by the Commission on Hospital Care, according to Foster L. Fowler, executive director of the state commission.

The state is primarily concerned with physical aspects such as adequacy of the plant, fire safety, sanitation, and the type of medical records. JCAH checks into the quality of medical care and the nursing service.

Council on Alcoholism Reports Year's Activities

In Mississippi there are two groups which exist solely to help the alcoholic. One, Alcoholics Anonymous, is generally well known. The other, the Jackson Council on Alcoholism, is less familar.

The main project of the Jackson Council, an affiliate of the National Council on Alcoholism, is the Alcoholism Information Center, 723 South State Street, Jackson. The Center is neither a treatment facility nor a case-finding agency—it is a voluntary health agency which serves as a source of guidance and referral for alcoholics, their families and employers, and as a source of factual information about the illness of alcoholism.

According to the annual report of the Jackson Council, the Information Center in 1959 served over 350 persons, alcoholics and non-alcoholics, some of whom are counted in this figure for more than one service. Over 5,000 pieces of literature were distributed.

New note for 1960 is an advisory committee to study the need for treatment and rehabilitation facilities in this area. Travis McCharen is acting chairman of the advisory committee.

The Council is again planning a Mississippi Summer School of Alcohol Studies. The school has been set for August 1 through 5 at Millsaps College.

Bad Debts Cost Doctors Over $1 Million

Bad debts cost U. S. doctors $171,600,000 last year. This is the estimation of the May *New Medical Materia.* The magazine surveyed 5,000 doctors selected at random and found that 77.6 per cent of all U. S. doctors wrote off bad debts last year.

Full-time specialists lost $73,200,000, part-time specialists, $30,000,000, and GP's $68.-400,000. The average physician lost $1,358 in bad debts.

The survey showed that one patient out of 14 turns out to be a bad debt. The average part-time specialist lost $1,819 in 1959, the average full-time specialist $1,239, and the average GP $1,-397.

Big city doctors showed the smallest loss. The average loss in cities of 10,000 to 500,000 population was $1,495, in cities under 10,000 population, $1,349, and in cities over 500,000 population, $1,098.

LETTERS

SIRS: We here at Letterman enjoyed the article ("Ephebiatricians: Bobby-Socks' Doctors," JOURNAL MSMA, April 1960) completely and are most happy to see that other members of the profession are sharing our interest in the adolescent as a person.

We would have only one real comment to make. However, it is regarding a point about which we feel very strongly indeed. (You write:) "Ephebiatrics is a young specialty. It has yet to get its admittance papers to the medical dictionaries and the American Boards."

It is our feeling along with others that the worst thing that could happen to adolescent medicine would be the formation of a separate specialty devoted to it. Rather the adolescent should be cared for by an interested physician regardless of his specialty or lack of one. His interest and not the fact that he is a pediatrician, internist or general practitioner should be the determining factor. Perhaps the time honored GP would be best of all in his role as the "family physician." He could follow the patient for years. The pediatrician can extend his normal age limit to include these patients and the internist can lower his and both can still give the continuity we seek.

But to interject the ephebiatrician between the pediatrician and the internist would just add more confusion to the teen-ager and make one more step up the ladder of increasing age where he would have to learn to know another physician. It is our feeling then that the ephebiatrician should be secondary to the physician and the word used to denote a member of the profession who is interested in the adolescent but not another specialist—for we have enough as it is.

We are most appreciative of your own evident interest in the adolescent and his medical situation.

FREDERICK C. BIEHUSEN, M.D.
MAJOR, M.C., CHIEF, PEDIATRIC SERVICE
LETTERMAN GENERAL HOSPITAL
SAN FRANCISCO, CALIFORNIA

Hicks to Head MSMA During Coming Year, Mrs. Reid Is President of Woman's Auxiliary

Dr. G. Swink Hicks

Mrs. Lee R. Reid

Dr. G. Swink Hicks, Natchez, will head the Mississippi State Medical Association as president during 1960-61.

A long time leader in medical organization, Dr. Hicks has served as MSMA vice president and is a past president of the Homochitto Valley Medical Society. He is also a member of the American Medical Association, the Southern Medical Association, the Southeastern Surgical Congress, and is a Fellow of the American College of Surgeons.

From 1956-59 Dr. Hicks served as a director of Blue Cross-Blue Shield.

Dr. Hicks received his B.S. and M.D. degrees from the University of Tennessee, Memphis, and interned at Fifth Avenue Hospital, New York City and St. Joseph's Hospital, Memphis. His residencies in surgery were taken at St. Luke's Hospital, New York City, and Stamford Hospital, Stamford, Conn.

During the Second World War, Dr. Hicks served as a major in the U. S. Air Force.

Mrs. Lee R. Reid, Jackson, will serve as president of the Woman's Auxiliary to the Mississippi State Medical Association for the coming year.

Mrs. Reid has been active on the state medical auxiliary board for several years as research and romance chairman and as doctors' day chairman. She has also served as Preventorium chairman, convention chairman, treasurer, and president of the Central Medical Auxiliary.

A member of numerous associations, Mrs. Reid is presently serving as secretary of the Hinds County Tuberculosis Association and takes an active part in the Goodwill Industries Auxiliary and the Harmony Hills Garden Club. Social organizations include the Camanae-Casual Luncheon Club, La Mercredea, and La Juenesse. She is a member of Galloway Memorial Methodist Church.

Mrs. Reid has two children, Mrs. N. L. Gill, Jr., Jackson, and Lee R. Reid, Jr., a sophomore at Georgia Tech, and one granddaughter, Tammy Lynn Gill, Jackson.

Drug Makers to Study Medicine Costs

Hopping mad over allegations leveled at the pharmaceutical industry by senate hearings top-heavy with testimony that drugs cost too much, the Pharmaceutical Manufacturers Association announced that a full scale study of the impact of drug cost on the American public will be undertaken. The frankly objective research project is part of a major public service program of the association, according to Dr. Austin Smith, PMA president.

Dr. Smith said the full resources of the PMA will be available for a broad study which will "bring together in one place information which has never been gathered in this country by any source, public or private."

Smith said the PMA will determine:

1) The extent of use of prescription drugs by the general population.

2) The segments of the population using drugs and under what circumstances.

3) The ways in which drugs are being provided in medical care programs.

4) Whether needed drugs are not available to patients.

5) Which elements, if any, of the population may be deprived of necessary drug therapy and the reasons for such deprivation if it exists.

6) The true relationship of prescription drugs to medical care needs and costs.

Dr. Smith said representatives of consumer groups and various members of the health team will be asked to assist in the study with a special industry group, whose membership will be announced shortly.

"It is widely stated by some," Smith said, "that needed medication is not available to all because of financial difficulties. If this is true, it is time somebody lays out in the open the specific facts. Then, and only then, can specific remedies be discussed intelligently. If it is not true, the reasons for the confusion should be revealed. For the first time, the efforts of all interested parties—manufacturers, members of the health team, public authorities and patients themselves—will be united to study drug therapy and the results of their efforts will be disclosed for public examination."

Dr. Smith pointed out that the PMA is just two years old. "We are now organized and staffed to broaden fulfillment of our responsibilities to both the public and the pharmaceutical industry," he said. "The study now under way is only part of a broad program that the PMA board of directors adopted some time ago as part of its public service activities."

Cox Polio Vaccine Said Successful

Insider's Newsletter (April 25) predicts overwhelming success for the Cox oral (weakened live-virus) vaccine against poliomyelitis.

Presently, citizens of Dade County, Florida, are conscientiously swallowing teaspoons of the cherry flavored liquid for the largest community-wide volunteer experiment with any vaccine in U. S. history. By the end of April, over half a million volunteers under 40 will have taken the Cox formula.

The *Newsletter* reports an exclusive interview with Richard Trecasse, assistant executive secretary of the Dade County Medical Association. Said Trecasse, "The Cox vaccine 'kills' polio virus, whereas Salk vaccine merely 'arrests' it. In 1959 there were 5,342 cases of paralytic polio in the U. S.—940 of those cases had had three or more Salk shots. That's why we gave Cox vaccine even to those who had had their quota of Salk shots."

Before and after tests on persons who had already received the Salk vaccine, showed that the number of antibodies was appreciably higher after taking the Cox liquid.

Advantages of the oral vaccine: (1) It can be dispensed and taken quickly and easily—no objectionable needle to be feared. (2) The estimated minimum amount of time of its effectiveness is five years for one dose—Salk vaccine requires three spaced monthly injections and regular booster shots every two years. (3) The reversion of the Cox vaccine to virulence is estimated at one chance in a billion—which makes it safer than smallpox vaccine.

When will the oral vaccine be available to the nation? It has to be licensed by the National Institute of Health, which will decide its effectiveness on the basis of the Dade County and other, smaller, controlled voluntary experiments. This coming summer results of the experiments will be polled and tabulated and will have bearing on the license permit. Due to early problems with the manufacture and dispensing of the Salk vaccine, extra precautions are being taken to be sure the same difficulties do not occur with this newest polio eradicator.

PERSONALS

WALTERINE H. BELL, Eupora, has returned to her practice after completing postgraduate training out of state.

CLYDE F. DEAL, has permanently moved his practice from the Scooba Clinic to Charles Town, West Virginia.

THOMAS A. HAEDICKE, has transferred from the Veterans Hospital in Jackson to the VA Hospital in Montgomery, Ala.

LUCIEN R. HODGES, Jackson, has returned from out-of-state training and has entered practice status.

ROBERT M. IZARD, JR., Jackson, has entered residency training at the Veterans Hospital, Houston, Texas.

EARL T. LEWIS, Jackson, has completed a residency at the University of Mississippi School of Medicine and entered practice in Evansville, Ind.

WALTER S. RIDGWAY, II, Jackson, has moved to Stamford, Connecticut, where he is pursuing a practice limited to obstetrics and gynecology.

JOHN S. RUOFF, Natchez, has retired after 48 years in the field of medicine. His career has been dedicated to preventive medicine and more recently, he has been associated with the Adams County Health Department.

NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association.

GODBY, MARIAN WRIGHT, Aberdeen. Born Scio, New York, October 3, 1908; M.D., Boston University School of Medicine, 1936; interned Margaret Hague Maternity Hospital, Jersey City Medical Center, Jersey City, N. J.; elected December 8, 1959, by Northeast Mississippi Medical Society.

GROOVER, EDWARD LARKIN, Holly Springs. Born Marietta, Ga., December 5, 1921; M.D., Emory University, Atlanta, 1951; interned University of Virginia Hospital, Charlottesville; general surgery residencies University Hospital, Birmingham, and Louisville General Hospital, Louisville, Ky.; Lieutenant, U. S. Navy, three years; elected April 7, by North Mississippi Medical Society.

LINDSEY, ARTHUR WILLIAM, JR., Greenville. Born Merigold, Mississippi, December 17, 1928; M.D., University of Mississippi School of Medicine, 1958; interned Arkansas Baptist Hospital, Little Rock; U. S. Army, one and a half years; elected April 13, by Delta Medical Society.

MOORE, CHARLES MORTIMER, Philadelphia, Mississippi. Born Charleston, Ark., May 28, 1929; M.D., Tulane University, 1956; interned Confederate Memorial Medical Center, Shreveport; Captain, U. S. Army Reserve, two years; elected February 2, by East Mississippi Medical Society.

YOUMANS, JULIAN RAY, Jackson. Born Baxley, Ga., January 2, 1928; M.D., Emory University, Atlanta, 1952; interned University Hospital, Ann Arbor, Mich.; general surgery residency University Hospital, Ann Arbor; neurosurgery residency University Hospital, Ann Arbor; elected April 5, by Central Medical Society.

DEATHS

JOHNSON, DEXTER D., Belmont; M.D., University of Tennessee, 1914; postgraduate training at Tulane University; practiced medicine in Belmont for more than 46 years; Emeritus member of MSMA; died at Tupelo Community Hospital, April 12, 1960, aged 70.

MARTIN, GIDEON M., Meridian; medical education, Mobile Medical School, Mobile, Ala., three years and Mississippi Medical College, Meridian, one year, M.D., 1908; interned Martin Sanatorium, Picayune; retired in 1946 after practicing medicine for 49 years; died March 23, 1960, aged 92.

RILEY, JAMES O., Greenwood Springs; M.D., Vanderbilt University Medical School, Nashville, 1894; practiced medicine in the Quincy area for more than 50 years; Emeritus member of MSMA and member Fifty Year Club; died in Gilmore Sanatorium, Amory, April 17, aged 91.

Constitution and By-Laws of The Mississippi State Medical Association

CONSTITUTION

Preamble

That more may live longer in the richness and comfort of health; that pain, suffering, and disease may be eradicated to the extent made possible by scientific medical knowledge; that the standards of the medical profession may be maintained on the highest plane of honor, we dedicate ourselves as physicians through this Association. Among us, membership is a privilege, earned by professional qualification, personal honor, and selfless service; it is not a right vested superficially nor by statutory licensure. Truth shall be our quest; diligence, our staff; and service, our purpose.

Article I

NAME OF THE ASSOCIATION

The name and title of this Association shall be the Mississippi State Medical Association.

Article II

PURPOSE OF ORGANIZATION

The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Mississippi and to unite with similar associations in other states to form the American Medical Association, with a view toward the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard and medical education, and to the enactment and enforcement of just medical laws, to the promotion of friendly intercourse among the physicians and to guarding and fostering of their opinion in regard to the great problems of medicine, so that the profession shall become more honorable and capable within itself, and more useful to the public in the prevention and care of disease, and in the prolonging of and adding comfort to life.

The purpose of this Association shall be to promote scientific medical research and practice and shall be a non-profit organization.

Article III

COMPONENT SOCIETIES

Component Societies shall consist of those societies which hold charters from the Association.

Article IV

MEMBERSHIP

Section 1. Members of the Mississippi State Medical Association. Members shall be active, associate, emeritus, or scientific, according to requirements and provisions of the By-Laws. There may also be invited guests. All degrees of membership other than associate and scientific shall be construed as active in connection with the rights and privileges accruing therefrom.

Section 2. Guests. Any physician not a resident of the state may become a guest during any annual session upon invitation of a member of the Association, and shall be accorded the privilege of participating in all the scientific work of that session.

Article V

SESSIONS AND MEETINGS

Section 1. The Association shall hold an annual session during which there shall be held daily not less than two general meetings, which shall be open to all registered members and guests.

Section 2. The time and place for holding the annual session shall be fixed by the House of Delegates, but in emergencies, the Board of Trustees shall have the power to fix, or change, either the time or the place, or both of the annual session.

Article VI

GENERAL OFFICERS

Section 1. The general officers of this Association shall be a President, President-elect, three Vice-Presidents, one from each Supreme Court District, Secretary-Treasurer, Speaker, Vice Speaker, and Editor.

Section 2. The President, President-elect, and Vice-Presidents shall hold terms of one year. The Secretary-Treasurer, Speaker, Vice Speaker and Editor shall be elected for terms of three years.

Section 3. The officers of this Association shall be elected by the House of Delegates on the last day of the annual session following the adjournment of the general meeting, but no person shall be elected to any such office who has failed to attend two-thirds of the past two and current annual sessions and who has not been a member for the past two years.

Section 4. In addition to these general officers, there shall be an Executive Secretary who need not be a physician or member of the Association. He shall be appointed by the Board of Trustees and shall serve at the pleasure of the Association. His compensation and expenses for duties performed shall be fixed by the Board of Trustees and confirmed by the House of Delegates.

Article VII

EXECUTIVE OR CENTRAL OFFICES

The Executive Secretary shall maintain in the city of Jackson suitable offices for the discharge of his duties and for conducting the administrative affairs of the Association.

Article VIII

HOUSE OF DELEGATES

The House of Delegates shall be the legislative, business, and policy-making body of the Association and shall consist of (1) delegates selected by the component societies under authorized apportionment, (2) the general officers of the Association, (3) all past presidents, provided they still be members in good standing of the Association, (4) members of the Board of Trustees and Councils, and (5) elected committees, Delegates and Alternate Delegates to the American Medical Association, members of the State Board of Health, and members of the Board of Trustees of Mental Institutions, all of whom must be members of this Association.

Article IX

BOARD OF TRUSTEES

The Board of Trustees shall be the executive and governing body of the Association during vacation of the House of Delegates and shall perform such duties as are prescribed by law governing directors of corporations and in the By-Laws of the Association. The Board shall consist of nine members, one from each Association District, elected for terms of three years each. A Trustee shall not serve more than three consecutive terms.

Article X

FUNDS AND EXPENSES

Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by annual dues, per capita assessments upon the membership, and by voluntary contributions. Funds may be appropriated by the House of Delegates to defray the expenses of the annual session, publications, and for any other purpose approved by the House of Delegates.

Article XI

THE SEAL

The Association shall have a common Seal with power to break, change or renew the same at pleasure.

Article XII

AMENDMENTS

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at the annual session, provided that such amendment shall have been presented in open meeting at the previous annual session, and that it shall have been sent officially to each component society at least two months before the session at which final action is taken.

BY-LAWS

Chapter I

MEMBERSHIP

Section 1. Eligibility. Each component society of the Mississippi State Medical Association shall judge the qualifications of candidates for election to membership therein, which shall be restricted to those persons who hold the degree of Doctor of Medicine from an appropriately accredited source as defined by the American Medical Association, or in lieu thereof, a foreign degree in medicine which is an acceptable equivalent to the Board of Trustees and shall be a citizen of the United States. All candidates for any degree of membership other than associate must be legally licensed to practice medicine in Mississippi. Persons who obtained this degree prior to January 1, 1917, need not comply with this requirement but must be licensed to practice medicine in Mississippi or, if offering to practice in Mississippi must be eligible for license by reciprocity and be a member in good standing of a constituent (state) association of the American Medical Association. Membership in a component society, evidenced by the payment of dues for the current year, shall be a prerequisite to membership in the Association, except that a physician upon his initial application for membership in a component society of the Association shall be required to undergo a waiting period of ninety (90) consecutive days from the date he begins the practice of medicine in the geographical area of the component society before he may be elected to membership in the component society. No physician shall be eligible for membership who has been convicted of or who has plead guilty to either a felony or a violation of a state or federal narcotics law. The duly certified court record shall be *prima facie* evidence of pleas and convictions and cause automatic revocation of membership.

Section 2 (a). Good Standing. Only those members in good standing shall be entitled to the rights and privileges of membership. A physician not in good standing may not be elected to office nor exercise the privilege of voting or attending any session of this Association, scientific or otherwise. The name of a physician upon the properly certified roster of a component society which has paid its annual assessment shall be *prima facie* evidence of his right to register at the annual session of the Mississippi State Medical Association. No member shall participate in any of the proceedings of the annual session until he is duly registered. No delegate or other member shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section. (b) Change of State Residence. In the event that a member moves from the State, his membership shall continue until, and lapse at the end of, the current fiscal year, but this provision shall not operate to prevent a physician who moves from the state continuing his membership by payment of all dues and assessments to the state Association. (c) Obligations of Membership. When the Executive Secretary of the Mississippi State Medical Association is officially informed by the secretary of a component society that a physician is not in good standing in the component society, he shall remove the name of the physician from the rolls of the Association. A member shall hold his membership through the component society in the jurisdiction of which he practices, provided that a physician living on or near a county line may hold membership in the society most convenient for him to attend. If the society in which he chooses to secure membership does not exercise jurisdiction over the area of his residence, then permission must be obtained from the jurisdiction society to facilitate his affiliation with the extra-jurisdiction society.

Section 3. Degrees of Membership. Members of the Mississippi State Medical Association shall be divided into the following classifications: Active, emeritus, associate, and scientific. (a) Active Membership. Active members shall include all eligible members of component societies in good standing, providing that all dues and assessments in this Association as may be hereinafter prescribed have been received by the Association. (b) Emeritus Members. Any member of the Mississippi State Medical Association who has been an active member for any ten consecutive years and shall have permanently retired from the practice of medicine shall be eligible for election to emeritus membership. Election to emeritus membership for reason of retirement in the case of permanent and total disability shall merit special consideration but shall be subject to ruling by the Board of Trustees. Election to emeritus membership shall be based on the recommendation of the component society and the approval of the Board of Trustees. (c) Associate Membership. Any commissioned medical officer in the United States Army, United States Air Force, United States Navy, or United States Public Health Service, or any physician in the employ of the Veterans Administration, not licensed to practice in the State of Mississippi, stationed in Mississippi, any hospital intern, or any hospital resident in Mississippi, may, on election to associate membership by the component society in whose jurisdiction the physician resides become an associate of the Mississippi State Medical Association. Associate members shall not vote or hold office. (d) Scientific Membership. Physicians meeting the professional qualifications set forth in Chapter I, Section 1, may be elected scientific members by component societies. The rights and privileges of scientific membership shall be limited

to participation in the scientific work of the association and such members shall not vote or hold office. Scientific members shall pay no dues to component societies or the state Association. In addition to these provisions, the privileges of scientific membership shall be subject to rulings of the Board of Trustees.

Section 4. Dues and Assessments. A per capita assessment determined by the House of Delegates shall constitute the dues of the Association, which assessment shall be collected from all active members by the respective secretaries of the component societies, provided that new members shall be accepted on payment of three-fourths of annual dues after May 1 and one-half of annual dues after September 1. Each active member shall pay the prescribed dues to the officer designated by the component society for transmittal to the Executive Secretary of the Association. Dues shall include a subscription to the official publication of the Association. (a) Members Excused From Payment. The Board of Trustees may, by majority vote, excuse a member from payment of dues because of undue hardship or similar circumstances warranting special consideration provided that the component society shall have excused in full the payment of dues for periods exceeding one year. Such circumstances shall be interpreted to include extended illness and temporary disability. (b) Emeritus Members. Physicians who have been elected emeritus members shall not be required to pay dues in the Association. (c) Payment of Dues and Delinquency. Dues of the Association are due and payable on December 31 of the year prior to that for which dues are prescribed. Failure to pay dues by April 1 of the year for which due shall result in forfeiture of membership privileges and the removal of the member's name from the rolls of the Association. A five dollar ($5.00) reinstatement cost shall be assessed against any member who is delinquent by reason of non-payment of dues after April 1 of the year for which dues are payable. A member in good standing who is called to active duty with the Armed Forces of the United States other than in the regular component shall be carried as an active member without payment of dues until such time as he is released from military service; receipt of publications of the Association during such period shall be at the expense of the member.

Section 5. American Medical Association. Members of this Association shall pay the dues or hold a legal exemption from the dues of the American Medical Association. These dues shall be paid through the component society to the Executive Secretary of the Mississippi State Medical Association, whose duty it shall be to transmit them to the American Medical Association and to obtain proper credits and receipts therefor.

Section 6. Revocation of Emeritus or Associate Membership. Any emeritus or associate membership may be revoked by two-thirds vote of the House of Delegates when, in the opinion of the House of Delegates, the conduct or actions of the emeritus or associate member violates any of the principles of the code of ethics or whose conduct or actions are not becoming to the honor conferred.

Chapter II

ANNUAL AND SPECIAL SESSIONS

Section 1. Time and Place. An annual session shall be held as required by Article V, Section 1, the Constitution of the Mississippi State Medical Association, which session shall in any event be held prior to the annual session of the American Medical Association. The place of the state session shall be fixed in accordance with Article V, Section 2, the Constitution of the Mississippi State Medical Association.

Section 2. Special Session. A special session of the Association or of the House of Delegates may be called by the President, with the approval of the Board of Trustees. The Board of Trustees is empowered to call a special session by majority concurrence.

Section 3. Inviting an Annual Session. A component society desiring the Association and House of Delegates to meet in annual session in a city within its jurisdiction may submit an invitation in writing or verbally through its representative to the House of Delegates at the annual session concerned with the selection of the site for the next regular scheduled meeting. The dates and site of the annual session selected may be changed by majority vote of the Board of Trustees in an emergency requiring such a change.

Section 4. Registration Privileges. Only the following shall be permitted to register at any session:

(a) Active members
(b) Emeritus members
(c) Associate members
(d) Invited guests
(e) Medical students of American Medical Association approved medical schools who are certified to the Executive Secretary of the Association by their respective deans.
(f) Interns and residents who are graduates of American Medical Association approved medical schools and who are connected with an approved hospital and who are certified to the Executive Secretary of the Association by their respective hospital superintendents in event they are not associate members of the Association.
(g) Commissioned medical officers of the United States Armed Forces who are on active duty and who if not associate members are certified to the Executive Secretary by their Post or Base Surgeons or Commanding Officers.
(h) Scientific members.

Section 5. Indebtedness. A member shall not be permitted to register unless all current indebtedness to both the Association and component of proper jurisdiction has been paid.

Section 6. Admittance. Admittance to any meeting of the House of Delegates, any scientific section, or any of the various exhibits at an annual session of the Association shall be limited to members in good standing, duly registered and invited guests, members in good standing of the Woman's Auxiliary to the Mississippi State Medical Association, duly accredited and registered members of the Press, and accredited technical and scientific exhibitors.

Chapter III

GENERAL MEETING

Section 1. Participation. The general meeting shall include all registered members and guests, who shall have equal rights to participate in the proceedings and discussions, but no member shall vote on any question coming before a section of the general meeting except those who have registered as members of such sections. Each section of the general meeting shall be presided over by its chairman. The address of the President and the Distinguished Service Oration shall be delivered before the general meeting at such time and place as many be arranged.

Section 2. Order. The order of exercise, papers, and discussions as set forth in the official program shall be followed from day to day until it has been completed. But no section shall be allowed to place more than five papers on its program, nor more than two invited guest essayists (out-of-state or non-member). When a section program is not completed within the time assigned, it shall not be allowed to continue into that assigned to another section.

Section 3. Time Restrictions. No address or paper before the Association, except those of the President and Orator, shall occupy more than twenty minutes in its delivery, except that guests may be allowed thirty minutes; and in formal discussion no one shall speak more than five minutes; and in informal discussion no one shall speak more than three minutes and not more than one time.

Section 4. Essayists. With the exception of the invited guests, the essayists must be members of the Association. No name shall appear more than once on the printed program to discuss a paper before the regular scientific sections unless such person qualifies for membership as provided in these By-Laws.

Section 5. Papers. All papers read before the Association shall be its property. Each paper must be read by its author, and must be deposited with the Secretary when read.

Section 6. Failure to Read Paper. No author listed on the program who fails to read a paper at the session may be allowed a place on the program of the next annual session, but if the author, being unable to attend, shows his good intent by forwarding his paper to the Secretary before the annual session, he shall not suffer the penalty.

Chapter IV
SCIENTIFIC SECTIONS

Section 1. Designation of Sections. The scientific sections of the Association shall be as follows: (a) Section on Medicine, (b) Section on Surgery, (c) Section on Preventive Medicine, (d) Section on Eye, Ear, Nose and Throat, (e) Section on Pediatrics, (f) Section on Obstetrics and Gynecology, and (g) Section on General Practice.

Section 2. Section Officers. Each scientific section of the Association shall, as the last order of business during its regular meeting, elect a chairman and secretary who shall serve for a period of one year. A majority of votes cast shall be necessary to elect.

Section 3. Program. The Council on Scientific Assembly shall place any paper in its proper section. The Council shall so arrange the program that no one section shall be given precedence over others two years in succession.

Chapter V
HOUSE OF DELEGATES

Section 1. Apportionment and Representation. Each organized county shall be entitled to representation in all regular and special sessions of the House of Delegates, one delegate or one alternate for each fifty members in the county and one delegate or one alternate for each fraction thereof, but each organized county holding a charter from this organization having made its annual report and paid its assessments, as provided in this Constitution and By-Laws shall be entitled to at least one delegate or alternate, said alternate delegates to act only in the absence of the delegate or delegates from the respective counties. No county in a component society shall be without representation in the House of Delegates; each shall be entitled to one delegate and one alternate without regard to total membership. No alternate may be seated at any regular or special session of the House of Delegates unless the delegates elected from that county shall be absent or otherwise unable to participate in the preceedings. In the event that neither the delegate nor the alternate is able to attend the regular or special session to which they have been accredited, then any *bona fide* resident of the county may, if properly registered, qualify himself as a delegate. No representative of the component society shall be seated in the House of Delegates until all his dues, assessments, and obligations to the component society have been paid. Delegates and alternates shall be elected by their respective component societies for terms of not less than two years and shall assume office on the first day of the annual session following their elections; they shall be *bona fide* residents of the counties which they represent. Their names shall be reported to the Central Office of the Association not later than thirty days prior to the first day of the annual session. Representatives of component societies shall be seated in the House of Delegates only following their proper registration of credentials from the component societies they represent.

Section 2. Meetings and Attendance. The House of Delegates shall meet annually on the first day of the annual session of the Association, and there shall be at least one scientific meeting scheduled for that day. The House of Delegates shall meet for the conclusion of business on the last day of the annual session immediately following the adjournment of the last general or scientific session, provided that these requirements shall not operate to prevent such other meetings of the House of Delegates during the annual session as the House itself may order or the President or Speaker may deem necessary, but no such meetings may be called at times which would conflict with the scheduled general or scientific session. Duly registered members and guests may attend all meetings of the House of Delegates provided that they occupy a distinctly separate section of the meeting hall or auditorium and further provided that they shall not be permitted to participate in any phase of the meeting of the House of Delegates except on invitation of that body. By majority vote, the House of Delegates may enter into executive session, during which time only qualified delegates and officers of the Association may remain in attendance.

Section 3. Quorum. A three-fifths majority of registered and duly seated delegates of this Association shall constitute a quorum.

Section 4. Order of Business. The order of business shall be conducted at the pleasure of the House of Delegates, provided it shall not be in conflict with either these By-Laws or the Constitution. Meetings shall be conducted according to *Robert's Rules of Order, Revised,* and within the bounds of courtesy and this Constitution and By-Laws. Generally, the order of business shall be:

(1) Adoption of the Transactions of the previous meeting.
(2) Reports of Boards, Councils and Committees.
(3) Reports of Presidential Committees.
(4) Special Orders.
(5) Unfinished Business.
(6) New Business.

Section 5. Memorials and Resolutions. No memorials or resolutions shall at any time be issued in the name of the Mississippi State Medical Association by any officer or member thereof until such memorial or resolution has been approved and adopted by the House of Delegates or Board of Trustees.

Section 6. Duties and Responsibilities. It shall, through its officers and otherwise, give diligent attention to foster the scientific work and spirit of the Association, and shall constantly study and strive to make each annual session a stepping stone to future ones of higher interest. It shall consider and advise the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation and to diffuse popular information in relation thereto. It shall make careful inquiry into the condition of the profession of each county in the state, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in the counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality, and shall continue these efforts until every physician in every county in the state has been brought under medical society influence. It shall encourage postgraduate work in medical centers, as well as home study and research, and shall endeavor to have the results utilized and intelligently discussed in the component societies. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that

body, the term of office to begin on January 1 of the year following that of the elections and continuing for two successive years. It shall, upon recommendation of the Board of Trustees, provide and issue charters to counties organized to conform to the spirit of the Constitution and By-Laws.

Section 7. Reference Committees. Business brought before the House of Delegates will normally be referred by the Speaker for hearing, debate, and recommendation to a reference committee. Sufficient reference committees shall be appointed by the President to expedite and assist in the deliberations of the House of Delegates. Such committees shall consist of not less than three nor more than five members, all of whom shall be members of the House of Delegates, who shall serve only during the regular or special session for which appointed. Any member of the Association shall have the privilege of appearing before a reference committee on any issue being considered. Additionally, reference committees may permit the appearance of any individual who, in the opinion of the committee, can assist its deliberations.

Chapter VI
ELECTION OF OFFICERS

Section 1. Ballot. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect.

Section 2. Nominations. The House of Delegates on the first day of the annual session shall select a Committee on Nominations consisting of nine members of the House of Delegates, one from each Association District. It shall be the duty of this committee to consult with the members of the Association and to hold one or more meetings at which the best interests of the Association and of the profession of the state for the ensuing year shall be carefully considered. The committee shall nominate to the House of Delegates three names for each general officer vacancy and two names for all other offices. No two candidates for President-elect may be named from the same county. Nominations for appointment to membership on the Mississippi State Board of Health shall be made by the House of Delegates in accordance with Section 7024, Mississippi Code of 1942, provided that six names shall be submitted, three of whom shall be elected and their names submitted to the Governor as nominees from each district, provided no member shall be nominated who has served two consecutive terms. The House of Delegates shall nominate five physicians when vacancies occur on the Board of Trustees of Mental Institutions which nominations shall be submitted to the Governor in accordance with law.

Section 3. Report of Nominations. The House of Delegates shall receive the report of the Committee on Nominations and elect officers, Trustees, and Council members on the last day of the annual session.

Section 4. Nominations from the Floor. Nothing in this Chapter shall be construed to prevent additional nominations being made from the floor by members of the House of Delegates.

Section 5. Executive Secretary. The Board of Trustees shall select and appoint an Executive Secretary as elsewhere prescribed in the Constitution and By-Laws of the Association.

Chapter VII
DUTIES OF OFFICERS

Section 1. President. The President shall have general supervision over all meetings of the various bodies of the Association, shall appoint all committees not otherwise provided for, shall deliver an annual address at such time and place as may be arranged, and shall perform such other duties as custom and parliamentary usage may require. He shall fill by appointment all vacancies occurring during his tenure of office among the general officers and on the Board of Trustees and Councils and shall be empowered to appoint such committees on an *ad hoc* basis as may be desired or required to conduct the affairs of the Association. He shall be an *ex officio* member of all Councils and committees. He shall be the real and acknowledged head, as well as the personal representative, of the medical profession of the State of Mississippi during his term of office, and insofar as practicable, shall visit by appointment the various sections of the state and the component societies of the Mississippi State Medical Association and assist the Trustees in their tasks of aiding and strengthening the component societies and in making their work more useful.

Section 2. President-elect. The President-elect shall be in charge of the work of organization, including membership, under the direction of the President, and shall exercise these duties and advise with the Vice Presidents and with the Board of Trustees in this phase of their activity. He shall be an *ex-officio* member of all Councils and committees. He shall succeed to the presidency upon the event of the death, resignation, or removal from office of the President. This automatic succession shall not operate to disqualify him from serving the next regular term of office unless he has served more than six months as President.

Section 3. Vice Presidents: The Vice Presidents shall assist the President in the discharge of his duties. They shall further assist the President-elect in the work of organization, including membership in their respective areas, and in promoting the welfare of the Association and the profession of the state.

Section 4. Speaker. A Speaker shall be elected for a term of three years. This officer may be chosen from the membership of the Association, irrespective of any affiliation with the House. The Speaker shall familiarize himself with the rules and usages of parliamentary procedure, with the laws of the House. On him shall devolve the duty of bringing before the House through the various officers and chairmen all reports and other matters that are to receive its attention. He shall preside at all meetings of the House and perform the duties usual to the position and office of chairman except in the appointment of committees, which shall be the privilege of the President.

Section 5. Vice Speaker. A Vice Speaker shall be elected for a term of three years to run concurrently with that of the Speaker. The Vice Speaker shall assist the Speaker in all duties prescribed in these By-Laws.

Section 6. Secretary-Treasurer. The Secretary-Treasurer shall be elected for a term of three years. He shall perform such duties ordinarily devolving on a secretary of a corporation by law, custom, or parliamentary usage and shall enjoy the rights and perform such other duties as may be granted or imposed in the Constitution and these By-Laws. He may delegate such duties as are herein described to the Executive Secretary who shall be responsible therefor. He shall be an *ex-officio* member of all Councils and committees.

Section 7. Executive Secretary. The Executive Secretary shall be appointed by the Board of Trustees and shall serve at the pleasure of the Association. He need not be a member of the Association nor a physician. He shall maintain a Central Office for the Association and shall be responsible for the management and proper functioning of the Central Office to the President of the Association and the Board of Trustees. He shall attend all sessions and meetings of the Association, the House of Delegates, the Board of Trustees, and shall serve at all times to perform such other duties as may be deemed beneficial to the Association by the President and Board of Trustees. He shall assist elected officers, Councils, committees, and Trustees in the performance of their duties. Under instructions from the President, he shall conduct a comprehensive program of public education and all such other activities as may disclose favorably to the public at large the aims, objectives, and goals of service of the medical profession in Mississippi. He shall, when re-

quested, place himself in position to assist any of the component societies of the Association and he shall attend meetings of the component societies when invited by officers thereof. He shall be made custodian of records, books and papers belonging to the Association and he shall keep account of and promptly place under the supervision of the Secretary-Treasurer such funds as may be delivered into his hands in the name of the Association. He shall give bond at the expense of the Association in such amount as may be required. He shall provide for the registration of the members and delegates at the annual session and cooperate in preparing for and arranging all functions of the Association, including the annual session. He shall procure an exact transcript of all proceedings of the House of Delegates. He shall maintain a register of all legal practitioners in Mississippi and he shall maintain detailed and exact records of the membership with regard to component societies, the Mississippi State Medical Association, and the American Medical Association. He shall issue evidence of membership to each physician who pays the annual assessment and is accepted in the Mississippi State Medical Association. He shall maintain close and complete liaison with the American Medical Association and shall keep the component societies informed of activities, programs, and mandates of both the state Association and the American Medical Association. He shall publish from the Central Office such memoranda, bulletins, and miscellaneous publications as may be directed by the President, the Board of Trustees, and the House of Delegates. He shall conduct the official correspondence of the Association as he may be directed. He shall employ such assistants as may be required, upon authorization of the Board of Trustees. He shall supply each component society with blank forms to be used in connection with membership and reports. He shall maintain records of monies paid by the component societies for assessments and dues. He shall prepare and publish under the direction of the President and Board of Trustees such programs as may be necessary for official functions of the Association. He shall be reimbursed for expenses incurred in the performance of his duties, separately and in addition to his regular compensation.

Chapter VIII
BOARD OF TRUSTEES

Section 1. Board of Trustees. The Board of Trustees shall be the executive and governing body of the Association during vacation of the House of Delegates. It shall consist of nine members, one from each Association District, where terms of office shall be three years and so arranged that only three members are elected annually. A Trustee shall not serve more than three consecutive terms. During vacation, the Board of Trustees shall exercise the powers conferred upon the House of Delegates by the Constitution and these By-Laws, provided that in the exercise of these powers thus conferred, the Board of Trustees shall neither consider nor act to contravene any action, mandate, or policy of the House of Delegates which may still be in effect.

Section 2. Officers of the Board. The Board of Trustees shall elect from its membership a Chairman, a Vice Chairman, and a Secretary for terms of one year during the last day of the annual session following adjournment of the House of Delegates. These officers of the Board shall compose its Executive Committee. The duties of the Secretary may be delegated to the Executive Secretary who shall maintain such special records and transcripts of meetings as the Board may desire.

Section 3. Meetings of the Board. The Board of Trustees shall meet daily during the annual session of the Association and at such other times as necessity may require, subject to the call of the Chairman or on petition of any three members of the Board.

Section 4. Executive Committee. The Executive Committee of the Board of Trustees shall be empowered to act in behalf of the Board on all matters delegated to it by majority vote of the Board. The acts of the Executive Committee, however, shall be subject to confirmation by the Board.

Section 5. Reports of the Board of Trustees. The Board of Trustees shall make an annual report to the House of Delegates and such supplemental reports as necessity may require at a time designated in the regular transaction of the business of the House. The report shall be made by the Chairman, the Vice Chairman, the Secretary, or the Executive Secretary. The reports of the Board shall be made a portion of the annual transactions and proceedings of the Association.

Section 6. Duties of Trustees. Each Trustee shall be organizer and arbiter for his Association District. He shall visit the component, medical societies within his District during each year and shall make an annual report of his activities and of the condition of the medical profession of each county of his District. Each Trustee shall be reimbursed for expenses incurred by him in traveling within his District or attending special meetings in the performance of his official duties, which will be allowed upon presentation of an itemized and documented account. This provision shall not be construed to include his expenses in attending the annual session of the Association.

Section 7. Public Policy. The Board of Trustees shall have the right to communicate the views of the medical profession and of the Association in the State of Mississippi with regard to matters of medical science, health, sanitation, and allied spheres of activity. It shall approve all memorials and resolutions issued but shall not issue memorials and resolutions heretofore prohibited in these By-Laws.

Section 8. Association Districts. The State of Mississippi shall be subdivided into Association Districts by counties, provided that all counties in a component society shall be in one Association District. There districts are defined as follows:

District 1: Bolivar, Coahoma, Humphreys, Leflore, Quitman, Sunflower, Tallahatchie, Tunica, and Washington.

District 2: Benton, DeSoto, Lafayette, Marshall, Panola, Tate, Tippah, Union, and Yalousha.

District 3: Alcorn, Calhoun, Chickasaw, Clay, Itawamba, Lee, Lowndes, Monroe, Noxubee, Oktibbeha, Pontotoc, Prentiss, and Tishomingo.

District 4: Attala, Carroll, Choctaw, Grenada, Holmes, Montgomery, and Webster.

District 5: Hinds, Issaquena, Leake, Madison, Rankin, Scott, Sharkey, Simpson, Smith, Warren, and Yazoo.

District 6: Clark, Kemper, Lauderdale, Neshoba, Newton, and Winston.

District 7: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Pearl River, Perry, and Wayne.

District 8: Adams, Amite, Claiborne, Copiah, Franklin, Jefferson, Lawrence, Lincoln, Pike, Walthall, and Wilkinson.

District 9: Hancock, Harrison, Jackson, and Stone.

Chapter IX
COUNCILS

Section 1. Councils. Councils of the Association shall be elected standing bodies of the House of Delegates, responsible thereto. There shall be a Council on Medical Service, a Council on Scientific Assembly, a Judicial Council, a Council on Socioeconomic Affairs, a Council on Constitution and By-Laws, a Council on Legislation, a Council on Budget and Finance, an Editorial Council, and a Council on Medical Education. A Council member shall not serve more than three consecutive terms.

Section 2. Council on Medical Service. The Council on Medical Service shall be charged with the responsibilities of ascertaining and studying all aspects of medical care in Mississippi. It shall examine and make available all facts, data, and opinion on timely and adequate medical care. It shall investigate social and economic aspects of medical care and report its evaluations and findings. It shall suggest means of distribution of adequate quality medical service to the public consistent with the policies of the Association. It shall act as a factfinding and advisory body of the Association. Under its jurisdictions, there shall be assigned the activities of the Association in medical service, emergency service programs, indigent care, and allied medical agencies. There shall be one member from each Association District elected for a term of three years and so arranged that only three members shall be elected for full terms each year. The Council on Medical Service shall appoint Committees on Cancer Control, Industrial Health, Federal Medical Services, Maternal and Child Care, Mental Health, Diseases of the Heart, and Aging. Each committee shall consist of not less than five nor more than seven members appointed for periods of not less than one nor more than three years.

Section 3. Council on Scientific Assembly. The Council on Scientific Assembly shall be composed of the Secretary-Treasurer and the chairmen of the several scientific sections. The Secretary-Treasurer shall be Chairman of the Council. Upon this Council shall devolve the duties and responsibilities of planning the annual session to include all scientific activity and the programming and scheduling of annual session events. The Council shall be empowered to appoint such committees for terms not to exceed one year as may be necessary to assist in the discharge of these duties.

Section 4. Judicial Council. The Judicial Council shall consist of nine members elected for terms of three years each, one from each Association District. The judicial powers of the Association shall be vested in this Council whose decision shall be final. The Council shall have jurisdiction in all questions involving membership in the Association, all controversies arising under the Constitution and these By-Laws, interpretation and application of the Principles of Medical Ethics of the American Medical Association, controversies between two or more component societies of the Association and among members of the Association. The Council shall have appellate jurisdiction in questions and controversies referred to the state Association by appropriate and authorized bodies of component medical societies. Appeals shall be perfected within six months following the date of decision by the constituted authority of the component society. The Council, under these several authorities, may conduct such hearings as may be necessary and after due and legal processes may, by majority opinion, censure, suspend, or expel any member for infraction of the Constitution or these By-Laws.

Section 5. Council on Socioeconomic Affairs. The Council on Socioeconomic Affairs shall consist of nine members elected for terms of three years each, one from each District of the Association. The Council shall be charged with the responsibility of studying and inquiring into all socioeconomic aspects of medical practice from broad and inclusive viewpoints. It shall be concerned primarily with the economic problems confronting the individual practitioner and medical organization and shall monitor closely programs of government affecting medical practice. The Council shall have authority to designate and appoint such committees as may be necessary to assist in the discharge of these duties; such committees shall serve on an *ad hoc* basis not to exceed one year.

Section 6. Council on Constitution and By-Laws. The Council on Constitution and By-Laws shall consist of three members elected by the House of Delegates for terms of three years each. To this Council shall be referred all suggested amendments and changes in the Constitution and By-Laws of the Association for recommendation to the Board of Trustees and House of Delegates.

Section 7. Council on Legislation. The Council on Legislation shall consist of three members elected by the House of Delegates for terms of three years each. The Council shall analyze proposed legislation, recommending to the Board of Trustees courses of action for securing laws in the interest of public health and scientific medicine. It shall study and report the need for new or remedial legislation designed to serve the best interests of the state and nation.

Section 8. Council on Budget and Finance. The Council on Budget and Finance shall consist of three members elected by the House of Delegates for terms of three years each. This Council shall receive reports of the finances of the Association and to it shall be referred all matters pertaining to the annual budget. The Council shall report annually to the House of Delegates, making specific recommendations on the annual budget of the Association. This Council shall be responsible to the Board of Trustees.

Section 9. Editorial Council. The Editorial Council shall consist of the Editor and the Associate Editors, elected by the House of Delegates to serve two years, and the former shall serve as chairman. To this Council shall be referred all reports of scientific subjects and all scientific papers and discussions presented before the Association and its component societies. The Council shall consider for publication in the official organ of the Association such papers, reports, and other data as may serve to further and advance scientific medicine in Mississippi. It shall exercise editorial authority over the official organ of the Association. This Council shall be responsible to the Board of Trustees.

Section 10. Council on Medical Education. The Council on Medical Education shall consist of three members elected by the House of Delegates for terms of three years each. To this Council shall be assigned the responsibilities of encouraging undergraduate and postgraduate study of medicine, licensure, and facilities for medical education in the state. This Council shall be responsible to the Board of Trustees.

Chapter X

COMMITTEES OF THE BOARD OF TRUSTEES

Section 1. Committees of the Board of Trustees. Standing committees of the Board of Trustees shall consist of the Advisory Committee to the Medical Auxiliary, Grievance Committee, and the Committee on Publications. All committees of the Board of Trustees shall be appointed by the Board for terms specified unless their selection is otherwise prescribed.

Section 2. Advisory Committee to the Medical Auxiliary. The Advisory Committee to the Medical Auxiliary shall consist of three members appointed for terms of three years each. The committee shall be charged with the responsibility of advising the Woman's Auxiliary to the Mississippi State Medical Association on matters of organization and program activity relating to the supportive role of the Auxiliary in its work with the Association.

Section 3. Grievance Committee. The Grievance Committee shall be appointed by the President with the advice and consent of the Board of Trustees. Its purpose shall be to prevent or resolve misunderstandings, to clarify and adjust differences between physician and patient, and to assist in maintaining the high levels of professional deportment already established by the *Principles of Medical Ethics*. The committee shall consist of nine members, one from each Association District, appointed for terms of three years each so as to provide for appointment of three members annually. Members of this committee shall not simultaneously serve on any disciplinary or appeal body of the Association or its

component societies. The committee shall have authority to compel a response either in writing or by personal appearance from any member of the Association, authority to initiate investigations on its own motion, and authority to file charges in the name of the committee before the Judicial Council of the Association. Under no circumstances shall the Grievance Committee ever exercise a disciplinary function and its power and authority shall be limited to the receiving of complaints, conduct of investigations, hearings, mediation, arbitration, and where necessary, referral of matters to appropriate bodies for adjudication or discipline. The committee shall prescribe its rules for operation which shall not be in conflict with generally accepted guides promulgated by the American Medical Association.

Section 4. Committee on Publications. The Committee on Publications shall consist of six members. These shall consist of the Editor, the two Associate Editors, and three others, the three latter being appointed by the Board of Trustees for terms of three years which are so arranged to provide for appointment of one such member annually. The chairman of the committee shall be designated by the Board. The committee shall implement instructions and policies of the Board of Trustees relating to the official Journal of the Association. Additionally, the committee shall study and recommend to the Board policy proposals relating to organization and production of the Journal, reporting annually its deliberations.

Chapter XI

RULES AND CONDUCT

The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

Chapter XII

COMPONENT SOCIETIES

Section 1. Component Societies. All component societies now in affiliation with this Association or those that may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and By-Laws shall, upon application to the Board of Trustees and approval by the House of Delegates, receive a charter from and become a component part of this Association. The Board of Trustees and House of Delegates, on recommendation by the Judicial Council, shall have authority to revoke the charter of any component society whose actions are in conflict with the letter and spirit of this Constitution and By-Laws.

Section 2. Number of Societies. Only one component medical society shall be chartered in any county but nothing in this section shall be construed as to prohibit unofficial organization of medical clubs or other county level groups of physicians whose purpose it is to further and advance scientific medicine and postgraduate medical education.

Section 3. Members of Societies. Each component society shall judge the qualifications of its own members, but as such societies are the only portals to this Association and to the American Medical Association, every reputable and legally registered physician who is qualified under Chapter I, Section 1, of these By-Laws shall be eligible for election to membership, provided scientific members shall also qualify under Chapter I, Section 3, subsection (d) of the By-Laws. Before a charter is issued to any component society, full and ample opportunity shall be given to every such physician in the county to become a member.

Section 4. Right of Appeal. Any physician who may feel aggrieved by the action of the society of his county or District in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Judicial Council, which, upon a majority vote, may permit him to petition for membership in an adjacent society.

Section 5. Evidence of Appeals. In hearing appeals, the Judicial Council may admit oral or written evidence, as in its judgment will best and most fairly present the facts, but in case of every appeal, efforts at a conciliation and compromise shall precede all such hearings.

Section 6. Area Jurisdiction. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

Section 7. Professional Authority. Each component society shall have general direction of the affairs of the profession in its jurisdiction and shall constantly use its influence to the moral and professional betterment of its physicians, to the end that the membership shall embrace every qualified physician in its jurisdiction.

Section 8. Meetings. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall especially be encouraged to do postgraduate work, and to give the society first benefit of such labors. Official positions and other preferments shall be unstintingly given to such members.

Section 9. Delegates, Each county shall be entitled to representation in the House of Delegates of this Association, one delegate for each fifty members or fraction thereof. Delegates shall be elected for terms of not less than two years and societies shall report such elections to the Executive Secretary of the Association in no event later than thirty days before the annual session.

Section 10. Duties of Component Society Secretaries. The secretary of each component medical society shall perform such duties as are usual and customary to his office. He shall maintain the official roll of membership for his society, shall collect dues and assessments, and shall make official reports as elsewhere prescribed in these By-Laws to the Association, transmitting dues in behalf of component society members. He shall conduct the official correspondence of his component medical society.

Chapter XIII

FISCAL YEAR

The fiscal year of the Association and its component county societies shall begin January 1 each year and end on December 31 following, but membership in the state Association shall not lapse until April 1 of that year.

Chapter XIV

AMENDMENTS

These By-Laws may be amended at any annual session by a majority vote of the delegates present at that session, after the amendment has laid upon the table for one day.

Chapter XV

REPEALING AUTHORITY

Upon adoption of these By-Laws, all previous By-Laws, motions of record, mandates, policies, rules and regulations in conflict therewith are hereby repealed, except that officers elected to serve in the Association and its component societies shall continue their incumbency until the completion of their previously prescribed terms and their successors elected under the current By-Laws.

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Recent JAMA editorial statement clarifies the current controversy about dietary fats

Excerpted from the March 12, 1960, issue of The Journal of The American Medical Association:

"It is accepted generally that specific alteration in the diet will lower the concentration of cholesterol in the blood. The most effective results to date have been achieved by increasing consumption of polyunsaturated fatty acids, particularly linoleic acid. However, indefinitive and conflicting information has left much to the imagination of some food processors. Some of the largest vegetable oil processors in the United States have implied in advertisements that the cholesterol level can be lowered merely by adding polyunsaturated fatty acids to the diet. This selling campaign has created confusion among lay people, making it increasingly important that the physician clarify for his patients the conditions under which changes in the diet will be effective.

The patient should understand that if he increases his consumption of polyunsaturated fatty acids without reducing his intake of other fats, little is gained save for additional calories which could lead to obesity. A particular regimen will be effective only if polyunsaturated fatty acids are responsible for an appreciable percentage of the total fat calories. That is, they must replace rather than supplement some of the saturated fats and oils already in the diet.

* * *

Some manufacturers cite the "iodine number" of a fat or oil as evidence of the unsaturated fatty acid content of their product. This number is not a reliable indicator of therapeutic value because it measures monounsaturated and polyunsaturated fatty-acid content at the same time. A monounsaturated acid, like oleic, takes up two iodine atoms but does not affect the cholesterol concentration of the blood. A polyunsaturated acid, like linoleic, takes up four iodine atoms. In a product containing large amounts of oleic acid and small amounts of linoleic acid, the iodine number is nearly the same as it would be for a product containing little oleic acid and a modest amount of linoleic acid. Cottonseed oil has an iodine number of 110 and corn oil a number of 127; yet they each have about the same amount of linoleic acid.

* * *

Low-fat diets will not reduce the concentration of circulating cholesterol and lipoproteins as effectively as will diets containing an adequate percentage of polyunsaturated fatty acids. Weight-reduction regimens are basically low in fat, and if a lowered cholesterol level is necessary, planning must be done to maintain the proper ratio of saturated to unsaturated fats."

* * *

Herbert Pollack, M.D.
Associate Professor of Clinical Medicine
Postgraduate Medical School
New York University, New York

Where a vegetable (salad) oil is medically recommended for a cholesterol depressant regi

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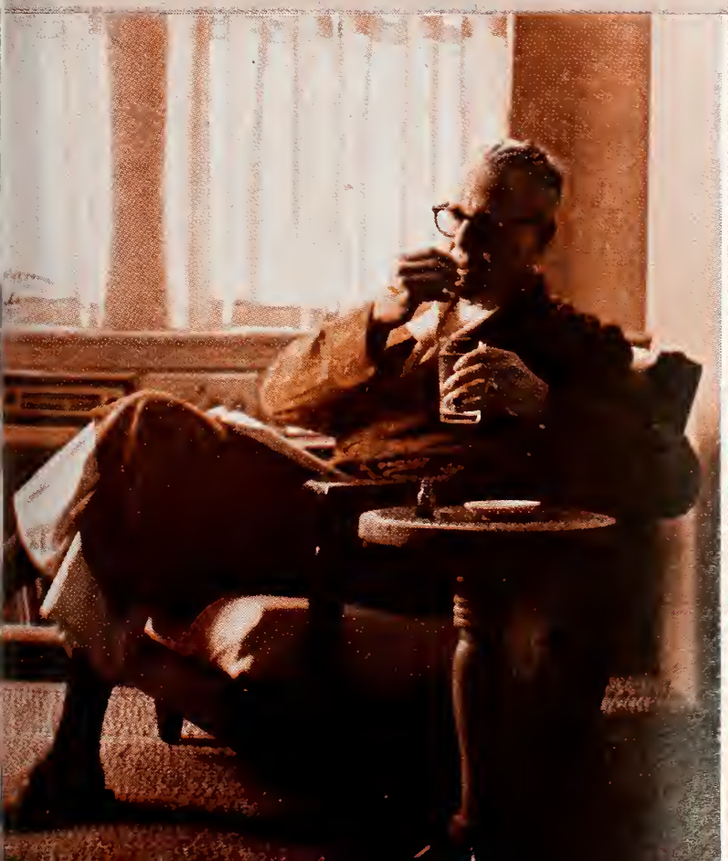

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meprobamate **plus** d-amphetamine... depresses appetite...elevates mood... eases tensions of dieting...**without** over-stimulation, insomnia or barbiturate hangover.

Dosage: One tablet one-half to one hour before each meal.

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FILMS / Continued

Human Gastric Function. 16 mm., color, sound, showing time 18 minutes. Produced by Cornell University Medical College and the Oklahoma Medical Research Foundation. No charge for loan service. Order from Medical Film Center, Smith, Kline and French Laboratories, 1500 Spring Garden St., Philadelphia 1, Pa. For professional audiences.

In this teaching film, Dr. Stewart Wolf, department of medicine, University of Oklahoma School of Medicine, reports on an experimental study of "Tom." A unique patient widely known in medical circles, "Tom" experienced an accident in early childhood resulting in an extensive gastric fistula. The fistula permitted examination of the stomach mucosa, secretory action and gastric motility under varying circumstances.

These studies, conducted over a period of years, afforded the investigators new insight into the stomach's complex responses to different psychological states and stresses.

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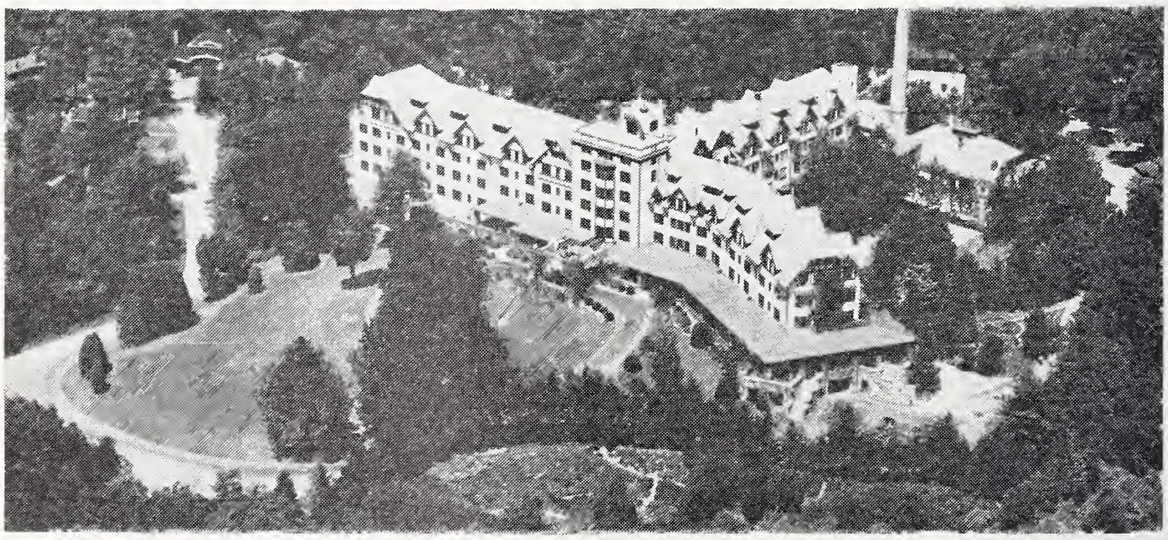

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Some strains of staphylococci resistant to other penicillins exhibit *in vitro* sensitivity to potassium phenethicillin.

ALPEN has greater freedom from the G. I. sequelae (overgrowth of resistant flora) sometimes observed with broad spectrum -mycins.

ALPEN gives much higher antibiotic levels within the first hour of ingestion by the well-tolerated oral route.

WHEN TO USE ALPEN Recommended in the treatment of infections caused by pneumococci, streptococci, gonococci, corynebacteria, and penicillin-sensitive staphylococci.

HOW TO USE ALPEN Depending on the severity of the infection, 125 mg. (200,000 units) or 250 mg. (400,000 units) three times daily may be used. In more severe or stubborn infections, a dosage of 500 mg. (800,000 units) t.i.d. may be employed. In beta hemolytic streptococcal infections, treatment should be continued for at least ten days.

PRECAUTIONS The usual precautions in the administration of oral penicillin should be observed. For further details see package literature.

Tablets: 125 mg. and 250 mg., bottles of 25 and 100. Powder for Oral Solution (lemon-lime flavored), 1.5 Gm. bottle (125 mg. per 5 cc. teaspoonful).

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ALPEN™—potassium phenethicillin

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MIT Plans Research Course

Intensive research is going on in many fields of medicine and biology. The success of the researchers depends to a great extent on their instruments.

Recognizing this, the Massachusetts Institute of Technology is planning its third biannual course on "Modern Research Methods in Biology and Medicine" for July 5 to 15.

The two week program will offer an intensive introduction to physical research methods and instruments which are used in or are applicable to biological and medical research. It is planned for research workers and research administrators in the fields of biology, applied biology, and medicine. The purpose of the course is to give researchers the information necessary for a logical selection of research methods or for the design of new methods and instruments.

The 1960 program will be under the direction of Dr. Kurt S. Lion, associate professor of applied biophysics. Lectures will be given by specialists from MIT and other universities.

All facilities at MIT will be open to members of the course, and housing will be available in the Institute's dormitories.

Application forms and full information may be obtained from Dr. James M. Austin, director of the summer session, Room 7-103, Massachusetts Institute of Technology, Cambridge 39, Massachusetts.

'Smoke Less—Live Longer' Advises New Pamphlet

Members of the "cigarettes cause lung cancer" school can now find new statistics to back up their fondest theories. They are printed in "Cigarettes and Health," a new Public Affairs Pamphlet, by Pat McGrady.

Writes McGrady, science editor for the American Cancer Society, "One survey after another has shown a sharp and undisputed statistical association between cigarette smoking and lung cancer. There is no contrary evidence from responsible sources."

He admits that there are areas of scientific dispute, many unresolved questions, and other pos-

sible explanations for the rise in lung cancer. However, McGrady contends that "the evidence against cigarettes is well-documented—and tests so far have failed to incriminate numerous other possible factors as a major cause."

McGrady reports the findings of Drs. E. Cuyler Hammond and Daniel Horn of the American Cancer Society. In a study of 11,870 deaths over a period of years, Hammond and Horn found:

1. Death rates from all causes, as compared with the rate for nonsmokers, were 34 per cent higher for those who smoked up to a half-pack of cigarettes a day; 70 per cent higher for ½ to 1 pack smokers; 96 per cent for 1 to 2 pack smokers; 123 per cent for 2-or-more-pack smokers.

2. Quitting smoking lowered the risk of death. Those who quit smoking a pack or more a day ten years before the survey died at a rate only 50 per cent higher than that of nonsmokers.

3. Lung cancer death rates, mounting steadily with the amount smoked, were 1,000 per cent (ten times) higher among regular smokers and 6,400 per cent (64 times) higher in heavy (2-or-more-pack-a-day) smokers than in nonsmokers. Only four nonsmokers were in the group of microscopically-proved lung cancers in this entire study; and ex-smokers had only half the lung cancer risk of those who continued to smoke.

4. Lung cancer death rates, standardized for smoking habits and age, were 25 per cent lower in rural than in urban areas—which suggests that there is either better diagnosis in the city or that air pollutants or other urban factors contribute somewhat to lung cancer. In both city and country, however, lung cancer was infrequent among nonsmokers and common among smokers.

Cigarette smoking may also be an important factor in heart disease, claims McGrady. He writes, "Drs. Hammond and Horn found that 52.1 per cent of all deaths among cigarette smokers in their study were from coronary artery disease. The death rate from this form of heart trouble was 70 per cent higher among smokers than nonsmokers—that is, if the smokers had the same coronary death rate as nonsmokers, 1,388 would not have died. Once, again, high death rates went hand in hand with the number of cigarettes smoked." Smoke less—live longer, McGrady advises.

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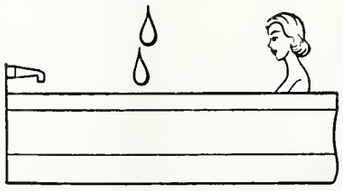

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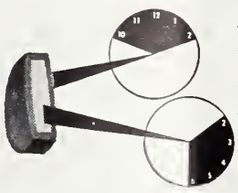

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NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

July 1960

Dear Doctor:

Unless legal recourses are soon found, the future of the American Cancer Society's tumor clinic program in Mississippi appears uncertain. ACS closed its patient care service June 15 after the attorney general ruled that only state-appropriated funds may be used for hospitalization of indigents. Edict came as a result of new restrictions imposed in State Hospital Commission law by recent Legislature.

> Although new law would pay up to $8.75 per diem to hospitals for care of indigent, SHC says reimbursement will stay at $6. Reason: total biennial appropriation wasn't increased above previous $1.5-million mark. Also discontinued was $3 cancer patient differential. ACS is working to reinitiate program.

With the Forand bill out for now, Washington observers give new Mills bill, H.R. 12580, good chance of passage. Measure provides for "near needy" aged to receive 120 days of hospital care, services of physicians, dentists, and nurses, other allied benefits, and nursing home care. Program would be funded by federal-state matching formula and couldn't be more liberal than present state old age assistance program. Also in bill are provisions to put physicians under compulsory Social Security and eliminate age 50 minimum for disability payment.

Governor Ross Barnett got a standing ovation from American medical leaders at Miami and Democratic party chairman Paul Butler was booed on same rostrum. Barnett denounced federal medicine and said "...we will take care of our own," while Butler called for Forand-type legislation. The Governor drew cheers when he affirmed free choice by saying "...I wasn't elected Governor of Mississippi to preside over the liquidation of personal freedom."

Mississippi Senator John Stennis' amendment to new Hill-Burton appropriation may result in an $85-million increase for hospital construction funds. As now approved by Senate Appropriations Committee, bill offers $150-million for old program and $60-million new money for fiscal 1960-61.

Sincerely,

Rowland B. Kennedy
Executive Secretary

AMA Pans 'Folk Medicine' And Homemade Wonder Preparation

Chicago - The best-seller, Folk Medicine, and the honey-and-vinegar theories of its author, Dr. D. C. Jarvis, drew fire from AMA's Council on Foods and Nutrition. Dr. Philip L. White, council secretary, said that the author "...has combined honey and vinegar and given the mixture some really fanciful properties." Widely quoted, the work advocates use of the weird concoction for good health but White says that honey is 20 per cent water, 79.5 per cent carbohydrate, and .3 per cent protein, leaving room for little else. Vinegar is about five per cent acetic acid and mostly water.

New Congressional Report May Clear Air On Fallout Debate

Washington - A new, realistic view on dangers of radiation fallout will soon be issued by the Joint Committee on Atomic Energy. Advance news on the report says it will discount as meaningless the Atomic Energy Commission's "maximum permissible dose theory" which some claim was made in behalf of continuing atomic test blasts. Truth of the matter, report will say, is that nobody knows exactly what safe exposure level is. In 1959, AEC's Dr. C. L. Dunham warned that continued tests will accelerate "...tragedies of cancer, leukemia, hereditary defects, and stillbirths."

New Arthritis And Rheumatism Chapter Organized

Jackson - A new statewide voluntary health organization, the Mississippi Chapter of the Arthritis and Rheumatism Foundation, will devote its programs to education and research, according to an announcement by Drs. A. Gayden Ward and F. C. McDuffie, co-chairmen of the medical and scientific committee. "The primary aim of the foundation is in assisting physicians in private practice in the care of such patients," the announcement said, "by sponsoring postgraduate courses and providing referral centers for indigent patients." The co-chairmen offered to supply further information to interested physicians.

Insurance Executive Would Expand Health Plan Objectives

Dallas - Preventive care and rehabilitation should be covered in health insurance plans, so said S. Bruce Black, a leader in insurance, addressing the recent annual meeting of the Health Insurance Association of America. Black called for the insurance industry to seek out ways to provide home care coverage and to support medical research in rehabilitation. Preventive aspects of health plans would parallel auto insurance safety crusades, Black asserted, just as life insurance carriers promote health education to prevent illness and prolong life. New proposal would furnish rehabilitative care through acute and convalescent stages to maximum reduction of impairment.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
July 1960, Vol. I, No. 7

ORIGINAL PAPERS

Diabetes and Pregnancy

T. K. DAMPEER, JR., M.D.
New Orleans, Louisiana

Advances have been made in the management of the pregnant diabetic in the last 10 years. Through recognition of the peculiar problems of this group, maternal and fetal mortality have been lowered in pregnant patients with diabetes. A series of 88 consecutive cases of diabetes in pregnancy at the New Orleans Charity Hospital is reported. Complications observed and treatment are discussed.

THE PAST DECADE might be termed the modern age in the treatment of the pregnant patient with diabetes. During this period maternal mortality has decreased among pregnant diabetics due to recognition and management of their particular complications. Fetal mortality in this group has decreased significantly, even though such incidence is still 20 to 30 per cent in many clinics.

The purpose of this paper is to re-emphasize the complications and physiologic derangements to which these women are particularly prone and to make current a report made in 1958 from the New Orleans Charity Hospital.[1]

The combination of diabetes and pregnancy is rare in any practice. To see a significant number of patients with this complication, one must turn to special diabetic clinics or to the hospital services for the indigent in larger communities.

Within the next 10 to 20 years, however, it may become commonplace to see pregnancies complicated by diabetes. Before the day of adequate diabetes control, women with the disease were usually infertile and when they did conceive, tended to abort early in pregnancy. With better control, patient education, improved insulins, and greater knowledge of carbohydrate metabolism, these women are able to conceive, carry, and deliver healthy children. Since diabetes is definitely an inherited disease, this means an increase in the number of diabetics.

Adams[2] reported that in one hospital from 1941 to 1951 only 50 diabetics reached 28 weeks gestation. In the next year there were 22 and in the next two years an additional 29. Thus, in a period of three years, more diabetics reached at least 28 weeks gestation than there had been during the previous 10 years.

As far as heredity is concerned, all children will have diabetes if both parents are diabetic; 50 per cent of the children will have diabetes if one parent has the disease and the other is a carrier; 25 per cent of the children will have diabetes if both parents are carriers. A diabetic mother and nondiabetic father, who is not a carrier, will have no diabetic children. The father must at least be a carrier.

In any report on diabetes in pregnancy some classification is necessary. Most authors today are

From the Department of Obstetrics and Gynecology, Tulane University School of Medicine.
Read before the Section on Obstetrics and Gynecology, 92nd Annual Session, Mississippi State Medical Association, Jackson, May 10-12.

using the historical classification of White[3] which is summarized in Table 1. Table 2 shows a comparison of fetal mortality and diabetic severity in this series. Others (Givens, Tolstoi and Douglas) believe that the metabolic status of the patient is of prime importance. By this is meant the patient's insulin requirement and the ease or difficulty with which control is maintained. White's classification is not entirely satisfactory because some Class C, D, and E diabetics give little trouble, whereas some B "brittles" are quite difficult to manage.

TABLE I
CLASSIFICATION OF DIABETIC PREGNANCY

Class	*Severity*
A	Requiring no insulin and little dietary regulation
B	Onset after age 20; duration less than 10 years
C	Onset between ages 10 and 19; duration between 10 and 19 years
D	Onset before age 10; duration 20 years or more
E	X-rays demonstrate calcification of pelvic arteries
F	Complicated by nephritis

Diabetes is an inherited metabolic defect which dates from birth or before. It is reflexion of a multiglandular disease not only involving the pancreas, but probably the pituitary, thyroid, and adrenal glands as well. So-called diabetogenic disorders, such as acromegaly, Cushing's disease, pregnancy, staphylococcal infections, and obesity may bring diabetes to the surface. Its presence may be divulged by embryopathies or changes in carbohydrate metabolism.

TABLE II
FETAL MORTALITY AND DIABETIC SEVERITY

Class	*No. Cases*	*No. Fetal Deaths*
A	33	9
B	37	9
C	14	8
D	4	3
Total	88	29—33%

COMPLICATIONS: FIRST TRIMESTER

Pregnancy causes alterations in carbohydrate metabolism and exacerbations of diabetes often occur during this time. This usually has been explained on the basis of an increase in steroid hormones in the blood during pregnancy. Snyder[4] and Hoopes[5] found that injections of gonadotrophic hormones in animals produced a picture of diabetes in the fetus characterized by overdevelopment and death in utero.

Recently, Frankel and Goodner[6] of Boston pointed out that there may be another possibility. These workers have found evidence of destruction of insulin by the human placenta which can start at a very early date. Human placenta was found to destroy insulin by degrading it into non-protein substances. Nondiabetic females can increase their production of insulin and thereby maintain normal blood levels in spite of the placenta action. Women with overt diabetes or prediabetes often have a low supply of endogenous insulin and pregnancy naturally aggravates their condition.

The present report covers 88 cases. Thirty-six of these were new, that is, picked up during the present pregnancy because of glycosuria with the diagnosis being confirmed by glucose tolerance tests.

ABORTION

Pregnant diabetics no longer have a higher early fetal loss than normal due to the development of long acting insulins and good control. With any degree of basic cooperation and with fairly decent control, early fetal wastage is no higher in today's diabetic pregnant patient than in the normal patient.

CARBOHYDRATE TOLERANCE

The patient's insulin reserve and tolerance to carbohydrates may change throughout pregnancy. These changes are most apt to start during the first trimester in the overt diabetic; however, they do not appear until later in pregnancy in so-called prediabetics. During pregnancy diabetes may become extremely labile and require constant supervision to prevent acidosis on the one hand and insulin shock on the other.

Should nausea and vomiting occur during the first trimester, management may become a most difficult problem. For some unknown reason, both nausea and vomiting to the extent of interfering with adequate caloric intake is rare in the diabetic. Ketosis and acidosis are extremely hazardous in these patients and are the leading causes of maternal mortality in diabetics in the United States and account for a large number of fetal losses. It is advisable, therefore, to hospitalize promptly any pregnant diabetic patient who has a significant degree of nausea or vomiting.

During the second trimester the basal metabolic rate begins to rise and there is a need for more carbohydrate in the diet. The renal threshold for sugar also begins to fall during this time. The renal threshold for sugar varies and it is, therefore, not to the patient's advantage and sense of well being to keep the urine free of sugar at all times. Adding to the difficulty of management at this time is the fact that the carbon dioxide combining power of the blood begins to fall, making acidosis much more likely. These three factors of increasing metabolic rate, decreasing or varying renal thresholds for sugar, and a decreased carbon dioxide combining power of the blood causes management to become a difficult problem.

This is not to advocate that diabetes be managed by blood sugars alone. However, at this time frequent postprandial or fasting blood sugars are necessary as a guide to the general trend of the disease. A little leniency is usually in order and the patient is allowed to spill a small amount of sugar. To keep the urine free of sugar at all times is impractical and leads to a sense of frustration, nervousness, and discouragement on the part of the patient. It must be emphasized, however, that the urine should always be kept free of acetone.

THIRD TRIMESTER

In the last 12 to 14 weeks of pregnancy the most unusual and interesting of all complications are encountered. These include: (1) an increased tendency to the development of toxemia as well as a tendency to the development of polyhydramnios; (2) an overweight or large baby; (3) sudden fetal death in utero; (4) a small increase in a tendency to premature labor, and (5) a small increase in the number of congenital anomalies.

It is known that the blood vascular system in diabetic patients seems to age prematurely. It seems logical to assume that in the pregnant diabetic the placenta might undergo the same process. Premature aging of the placenta might account for some of the late complications, such as toxemia and death in utero. All diabetic complications, however, may possibly be explained by a common cause which has yet to be discovered.

POLYHYDRAMNIOS

A clinically significant increase in amniotic fluid above normal has been reported in the literature anywhere from 5 or 6 per cent, to the other extreme in which some authors say that in every case of diabetes in pregnancy there is some excess amniotic fluid present. This is in most instances clearly a clinical interpretation, subject to extreme variations. The usual estimate is given as 15 to 20 per cent. In this series there were 20 cases or 22.7 per cent.

If polyhydramnios is to be a significant complication, it usually appears between the 26th and 28th week. Many of these women develop such a degree of overdistention that they become absolutely miserable and respiration may be embarrassed. Amniotomy through the abdomen or paracentesis is often of only temporary value. In most cases after abdominal amniotomy either premature labor will ensue or the fluid will reform in a short time. Diuretics play a questionable role in this condition and seem to be of only limited value.

TOXEMIA

The pregnant diabetic seems to be more prone to develop preeclampsia. Should this occur, the incidence of spontaneous intrauterine death is tremendously increased. During the last trimester the patient should be seen at weekly intervals to pick up any sign of an impending toxic condition. Eclampsia, for some reason, is an extremely rare complication in the pregnant diabetic, and almost never seen. In this group there were 24 cases which developed toxemia or 38.6 per cent. This is about double the usual incidence seen at this hospital.

LARGE BABY

Diabetic women tend to have large, oversized babies. This is not related to a state of hyperglycemia or poor diabetic control, because in many instances the development of large babies occurs in prediabetic women who bear their children years before the onset of overt diabetes. This phenomenon, however, becomes more prominent the closer the prediabetic woman approaches the onset of overt diabetes. The actual mechanism is at this time unknown.

It is regrettable that there is no accurate method of estimating the fetal weight in utero. So often an increase in the amount of amniotic fluid makes radiographic, as well as clinical, estimation of size most difficult and inaccurate. These fetal giants are fragile and do not tolerate even minor degrees of trauma during labor and delivery. Consequently, difficult delivery of a large fetus through the birth canal is still one of the major causes of fetal loss. If we had some way of accurately estimating fetal size before delivery, this could be eliminated.

In this series there were 19 babies weighing over 9½ pounds, with a loss of 10, or about one-half. There were eight cases of shoulder dystocia with three intrapartum deaths and one postpartum death, and one Erb's paralysis. It is probable that cesarean section would have circumvented the

four fetal losses and prevented the brachial plexus palsy. The radiographic demonstration of the distal femoral epiphysis as pointed out by Adams[7] eliminates much of the danger of prematurity.

One of the major problems in pregnant diabetics is the unsuspected, oversize baby which is not recognized and allowed to deliver through the birth canal. It is of paramount importance that physicians who do obstetrics be thoroughly acquainted with the early recognition and management of shoulder dystocia. Until there is an accurate means of estimating fetal size in utero, there will continue to be occasional traumatic labor and delivery through the birth canal with loss of an oversized infant.

DEATH IN UTERO

Spontaneous, unexplained fetal death in utero is an ever present possibility, particularly at the beginning of the 36th week. The incidence of fetal death in utero increases tremendously from the 38th week on. One of the most important advances in the treatment of the pregnant diabetic is the planned, early delivery of the baby at least by the end of the 37th week. To allow any pregnancy complicated by diabetes to go beyond 38 weeks is to invite disaster. In this series there were 15 spontaneous deaths in utero in 45 patients who went to 38 weeks and beyond, or an incidence of 33 per cent. This figure is entirely out of proportion to present day thoughts concerning the management of this situation. Unfortunately, most of these patients were uneducated, poor, and did not seek medical attention until they were admitted to the hospital in labor.

It is at times difficult to decide between early delivery with the chances of prematurity or normal delivery with the risk of sudden death in utero.

However, general belief is that even with the risk of prematurity these babies do much better in the incubator than in the toxic environment of the uterus from the 38th week on.

MANAGEMENT

Over a period of years the Charity Hospital staff has developed the following general treatment outline for a diabetic who reaches the last trimester.

No patient should be allowed to go beyond the 38th week. During the 30th to the 32nd week, the patient is evaluated at least weekly and more often if necessary. At each visit, these questions are considered: (1) Is the diabetes under good control? (2) Is there evidence of polyhydramnios? (3) Is there any evidence of developing toxemia? (4) Is the baby becoming oversized? As long as all these conditions remain favorable the patient is carried to the 37th week, but should not be allowed to go beyond 38 weeks.

Should toxemia develop any time during the 32nd week or afterwards, the patient is admitted to the hospital, stabilized for not more than 72 hours, and delivered. The baby seems to survive the risk from prematurity better than the toxic environment of the uterus.

ANTIHYPERTENSIVE DRUGS

The new antihypertensive drugs and diuretics are a tremendous aid in any patient, diabetic or nondiabetic who develops toxemia. These drugs play a major part in the rapidity and ease in which the patient is stabilized. However, they have not significantly increased fetal salvage in the presence of toxemia. Their greatest value lies in the fact that in the toxic patient stabilization is achieved much more rapidly than with older methods depending primarily on sedation. The disappearance of all of the demonstrable signs of toxemia does not necessarily mean that the disease or its effects are no longer at play.

The pregnant diabetic who develops signs of toxemia at the 32nd week or afterward should be stabilized rapidly and delivered immediately without any more trauma than is absolutely necessary. Should polyhydramnios develop after the 32nd week or a significant decrease in fetal movement occur, then the baby should be delivered immediately.

METHOD OF DELIVERY

The method of delivery has become rather simplified. If the cervix is ripe and favorable and it is felt that the patient can be easily induced, then the membranes are stripped, ruptured, and as much amniotic fluid as possible drained off. Pitocin is started and labor and delivery awaited. If it is felt that the patient is not easily induced, or that after a reasonable attempt at induction labor does not progress rapidly and smoothly, then a cesarean section should be done.

The cesarean section rate in this series was 19.8 per cent. Indications for cesarean section in this series in order of their frequency were: (1) previous cesarean section, (2) an unfavorable cervix for elective induction, (3) a bad obstetrical history which would include any previous traumatic delivery, (4) cephlopelvic disproportion, (4) toxemia, (6) acidosis.

More than 75 per cent of the antepartal fetal deaths occurred when pregnancy was a accompanied by recurrent acidosis and toxemia.

PREDIABETIC PERIOD

Most of the changes discussed above, appear in pregnancies of women who are some day destined to have diabetes. These changes appear with increasing frequency the closer a pregnancy antedates the development of overt diabetes. Hagbard[8] found that 20 per cent of all women who had babies weighing over nine pounds had abnormal glucose tolerance curves in the puerperium. Pregnancy, especially when associated with obesity, may make latent diabetes manifest. Many women probably have abnormal tolerances to glucose or even mild diabetes which are not diagnosed.

Improvement of results does not depend on any one factor, such as early delivery or increased use of cesarean section, but must come from an increased awareness of the possibility of an abnormal metabolic state being present. Any pregnant woman who has a history of a baby weighing nine pounds or more at delivery, or a family history of diabetes, should be investigated. Any patient who has had toxemia, premature birth, congenital anomalies, death in utero, or neonatal death in two or more pregnancies is highly suspicious and should be given a glucose tolerance test.

CONCLUSION

The experiences at the New Orleans Charity Hospital in the management of 88 consecutive cases of diabetes in pregnancy have been presented. The perinatal mortality was 33 per cent with no maternal deaths. The complications and altered physiology throughout pregnancy and the puerperium have been discussed. It is stressed that best results are obtained by an awareness of the possibility of deranged carbohydrate metabolism coupled with thorough medical management throughout pregnancy and delivery. ★★★

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OF SHOES AND SHIPS AND SEALING WAX

Health food note: Mixed greens are good for you—most people like tens and twenties best. . . . Sign seen at noon on door of Air Force School of Aviation and Space Medicine: "Out of this world for lunch—back at one." . . . And then there was the physician who was an amateur ornithologist: He crossed a homing pigeon and a woodpecker producing a bird which not only delivered messages but knocked at the door on arrival. . . . Memo of definition for doctor investors: Dividend—a certain percentum, per annum, perhaps.

Fever in Apparently Well Children

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Doctors, parents, and teachers often observe that apparently well children are running fever. The author, who has been interested in this phenomenon for over a quarter of a century, gives his observations and reports a study of 683 children. He suggests a possible relationship between the seemingly insignificant fevers of childhood and the cardiovascular diseases of later life.

WHY DO SO MANY APPARENTLY well children have fever? To date no one really knows. This paper will consider some of the possible answers.

In the first place, what is fever? Is it anything above the considered normal of 98.6 F.? If so, what about the fact that almost everybody has a little elevation above normal at times?

Wooley says that the body temperature is the sum of the total heat produced through metabolism in muscle, brain, and viscera plus or minus the gain or loss through radiation and conduction with environment, and minus the total heat loss through evaporation. When the equation produces a plus number, the patient has fever. When minus, he has a chill. When the two balance he has a temperature of 98.6 F. which is normal.[1]

NORMAL TEMPERATURE

Hence, the normal sublingual temperature is generally considered to be 98.6 F. and the manufacturers of thermometers have them so marked. On the basis of a deviation of ± 0.4 F., a temperature of 99.0 F. would be considered the upper limit of normal.[2] Any reading above 99.0 F., orally, may be considered fever.

The body is well equipped to maintain a constant temperature in most of the internal organs. Although there may be extreme changes in the environmental temperatures, the internal body temperature remains virtually constant.

The heat regulating mechanism situated in the hypothalamus is continuously stimulated by the temperature of the blood perfusing the area.[3] The anterior portion or parasympathetic area of the hypothalamus is particularly sensitive to heat. When it is stimulated by warmer than normal blood, it acts to dilate the peripheral superficial vascular bed, open the pores of the skin, slow down most of the body functions, and consequently heat is lost. The posterior portion (sympathetic area) of the hypothalamus when stimulated by perfusing blood of lower temperature, reverses the above procedure, preventing the dissipation of heat.

This body thermostat is finely calibrated, and in health allows only minor variations, barring extreme and/or continued exercise. Even the simplest test of cardiac reserve consisting of 50 hops produces a tachycardia of 120 or above, but no fluctuations of temperature are observed during or immediately thereafter. The hypothalamus compensates for this overproduction of heat by a compensatory heat loss and the body temperature remains stable.[4]

TOXIC DISEASES

However, most toxic disease processes throw this heat-regulating mechanism out of its ultrafine micromatic adjustment. The disturbance of balance prevents the anterior portion of the hypothalamus from reacting to higher-than-normal temperatures and dissipating heat. Simultaneously, the sympathetic area is raised thus increasing all body process and producing heat at a greater rate than it is spent. This we call fever. Likewise, retarding or eliminating the toxic process will normalize the heat regulating mechanism and defervescence occurs.

Read before the Delta Medical Society, Indianola, October 14, 1959.

The consideration that fever is the result of toxic disease makes the problem of why apparently well children have fever all the more important.

Youngsters sprain ankles and skin knees and 10 minutes later, sitting of the examining table, show 99.8 F. to 101 F. Doctors giving immunizations observe low grade fever only too often, and in pre-camp and school examinations the number of elevations is impressive.

The reaction of the parent is usually one of resentment and disbelief. The mother must see the thermometer herself and promptly declares it faulty. Sure she can read a thermometer. Why, didn't her doctor make her throw hers away year before last so she would not call him so much about this child's fever?

Then after she simmers down a bit, the mother will probably relate that the child hasn't been so well all this past season. He's fussy, irritable, you can't please him, he picks at his food and tires easily, though he recovers in a hurry and is gone again before you know it. And too, his breath is offensive.

THOROUGH HISTORY

At this point, a careful and thorough recorded history will be enlightening to physician and parents alike. It is amazing how many parents had fever, too, and at about the same age for several months or even years. Still more striking is the number of parents who have coronary heart disease or who have died with it. It is rare to find a grandparent of these children without a history of heart trouble, hypertension, or rheumatism.

Some of these children are in the prodromal stages of acute febrile illnesses which, within the matter of a few hours or at the most a day, will be recognized by the parents, teacher, or physician as an illness and will receive adequate care and attention.

Teachers often call attention to children with temperature elevations because they are lagging behind in their school work and many are behind their grades. They are also familiar with the fetid breath of the children and have previously assumed there was some connection between bad breath and poor school work.

Probably the largest group of these children have varying degrees and stages of so-called upper respiratory infections. This term is a misnomer. There is no such thing as "just an upper respiratory infection." The whole body is sick, every cell of it. All lymph channels from the tiniest capillary to the cisterna chyli are distended with lymph and corpuscles not unlike white blood cells. The nasal and pharyngeal submucosal lymphatics may be hypertrophied and edematous with pearly translucent deposits in the posterior pharynx of those who have had tonsillectomies.

All regional lymph glands, cervical, axillary and inguinal may be found somewhat enlarged and tender and may represent a factor in the cause of malaise. Likewise, the mesenteric lymphatics may be responsible for the stomach ache that so frequently accompanies this syndrome.

SUBCLINICAL RHEUMATIC FEVER

Some of these children may be classified as having subclinical rheumatic fever, or the "rheumatic state of Levine." It is believed that an appreciable number may in time develop sufficient signs and symptoms to satisfy the criteria of a diagnosis of acute rheumatic fever.

Taylor states that extended low grade fever may be attributed to active but atypical rheumatic fever, although clear-cut diagnosis may be extremely difficult. The characteristic arthralgia, subcutaneous nodules, and changing cardiac murmurs may be absent. Probable solution lies only in prolonged and careful observation of the heart, particularly noting poor quality of the apical first sound and sinus tachycardia out of proportion to the degree of fever.[5]

Schlesinger reports that exceedingly prolonged periods of fever may precede the clinical manifestation of acute rheumatic fever in children.[6] Bilderback reports a six-year-old child who after almost continuous fever for two and one-half years developed acute rheumatic fever.[7] Geppert observed a child with cyclic episodes of undiagnosed fever for five years prior to the classical diagnostic criteria of acute rheumatic fever.[5]

NO EXTENSIVE STUDY

The libraries of four medical schools, the Mississippi State Board of Health, and the American Medical Association have been unable to provide the results of any extensive study of temperatures in apparently normal children. Basil O'Conner, president of the National Foundation, states that practically no work has been done in the area of the relation between the upper respiratory infections of childhood and cardiovascular disease in later life.

This author conducted a survey of 683 children in camps and schools. The study showed that 287 children, 42 per cent, had temperatures above 99.0 F. Of 455 readings taken in the afternoon, there were 266, 58 per cent, with temperatures above 99.0 F.

Following is a check list of possible fever causes in the apparently well child which was worked out from the study. They are given somewhat in the order of incidence. Although many of these conditions are readily and easily diagnosed, certain other causes of fever are not included largely because they are obvious and would not raise the question of why the child has fever. Usually the apparently well child is in a prodromal stage of one or more of these situations:

1. Respiratory infections: Upper—rhinitis, pharyngitis, adenoiditis, tonsillitis, otitis, sinusitis, mastoiditis, adenitis. Lower—laryngitis, tracheitis, bronchitis, pneumonias.
2. G. I. Tract: gingino-stomatitis, gastroenteritis, appendicitis, intestinal parasites, constipation, diarrhea, vomiting.
3. Influenza: may embrace any of the above.
4. Rheumatic fever, or the rheumatic state, and associated conditions, chorea, and periarteritis nodosa.
5. Acute exanthemata: measles, mumps, rubella, roseola, scarlet fever.
6. Infectious diseases: tuberculosis, malaria, typhoid, brucellosis, tularemia, psittacosis, histoplasmosis, typhus, Rocky Mt. spotted fever, amebiasis, acute catarrhal jaundice, hepatitis, mononucleosis. Infectious dread diseases: meningitis, polio, cancer, especially leukemia and Hodgkin's, encephalitis (secondary to mumps or measles). Hidden abscesses: brain, kidney, subdiaphragmatic or other, teeth, osteomyelitis, pyelitis, cystitis, nephritis, acute bacterial endocarditis.
7. Allergies and drug reactions: sulfas, immunizations, smallpox vaccinations, typhoid shots, cold shots, Flu shots (especially Asian), P.D.T.P. shots and A.T.S., 7th day serum sickness.
8. Skin diseases: dermatitis, various kinds, impetigo, tinea, parasites, athletes foot, etc. especially secondarily infected, boils, carbuncles, acne, styes, sunburn, infected wounds however small, with lymphangiitis, regional adenitis and septicemia.
9. Sunstroke or heat prostration, inanition or dehydration, malnutrition, avitaminosis, anemias, brain or skull injuries, slight or remote.
10. Emotional factors: anxiety, tension, excitement, unhappiness at home or at school—"school fever," exhaustion.

The first hurdle is for the physician to admit that the child has fever and to realize that he is probably not well. By careful study a diagnosis may be immediately possible or it might remain elusive. After all the foregoing conditions have been considered and intelligently ruled out, a diagnosis of F.U.O. might possibly be justified. However, this term is too often a hole in the sand into which medicine sticks its head to hide professional laziness. F.U.O. might well be deleted from the vocabulary in favor of W.T.H., "What the heck?"

SUMMARY

No attempt has been made to conclude why a number of apparently well children have fever. However, it is theorized that there is a possible relationship between the seemingly insignificant fevers of children and the ravaging cardiovascular diseases of later life. Additional studies over extended periods of time consisting of readings during all normal activities, histories, and physical examinations should throw more light on the subject. Adequate laboratory procedure and interpretation should reduce the F.U.O. diagnosis to a minimum. ★★★

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A TURF PROBLEM

"I'm nearly out of my mind," said the distraught wife to the psychiatrist. "My husband thinks he's a race horse."

"Oh, that's not unusual," comforted the doctor, "I think we can help him."

"You simply must because last week, he won two races at Santa Anita."

Diagnosis of Headache by Therapeutic Tests

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In treating the headache victim, the physician seeks not only to relieve the symptom but to establish a diagnosis. The most valuable diagnostic aid is a careful history, but frequently, says the author, therapeutic tests assist the practitioner in determining an otherwise difficult diagnosis. The more common types of headaches are discussed and tests given.

HEADACHE IS A SYMPTOM which causes the patient to see the physician primarily in an effort to obtain relief. The physician must concern himself with both treatment and diagnosis and the differential diagnosis can often be a perplexing yet interesting problem. Admittedly, the most valuable diagnostic aid is a careful history, but frequently therapeutic tests will enable the physician to not only relieve the headache but to establish an otherwise difficult diagnosis. The purpose of this discussion is to attempt to differentiate among the more frequently seen types of headache.

VASOCONSTRICTING AGENTS

Relief of a headache by the use of vasoconstricting agents is diagnostic of a vascular origin. Vascular headaches, such as migraine, histamine cephalgia, tension headache, ciliary spasm, and myalgia are probably the most frequent type seen in office practice. According to Wolff, about 90 per cent of all headaches are the result of vascular disturbances, sustained muscle contraction about the head and neck, and vascular disturbances within the nose.

Migraine headache can almost uniformly be relieved by the subcutaneous administration of ergotamine tartrate if given early before muscle tension and vascular edema have occurred. Ergot preparations in sublingual or suppository form have been found to be just as effective in many migraine patients. Ergot preparations are up to 90 per cent effective in migraine but only 10 to 15 per cent effective in cases of nonmigrainous headache.

The addition of Octin to ergotamine tartrate produces a good synergistic effect by mitigating the smooth muscle contraction secondary to the ergotamine. This combination may be effective when ergotamine alone is not, but close observation for significant hypertension is imperative. In the third stage of migraine when edema is marked, relief of headache is difficult, but intravenous calcium gluconate, hypertonic glucose, antihistamines or Robaxin may afford some relief. Heavy sedation may be necessary but, as in all chronic headaches, narcotics should be withheld.

INTRAVENOUS ROBAXIN

We have been impressed with the often dramatic relief of pain of myalgic origin which may follow a vascular headache such as migraine by the use of intravenous Robaxin. Robaxin supposedly has a highly selective activity on the internuncial neurons of the spinal cord, interrupting abnormal impulses from areas of disturbed skeletal muscle. Whether skeletal muscle spasm results from a tension state, migraine attack, fibrositis, torticollis or myalgia, Robaxin often effectively diminishes the nervous impulse that causes the spasm and its resultant pain. It relieves skeletal muscle spasm and the side effects are infrequent and slight. Oral dosage thereafter for a short period helps prolong the relief.

In the differentiation of vascular headaches, it must be remembered that headaches other than migraine may be relieved by vasoconstrictors. For

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example, the pain of the headache due to essential hypertension or a cerebral aneurysm may sometimes be relieved by the use of vasoconstrictors and the therapeutic response should not be used as a guide to diagnosis. Histamine cephalgia is another type of vascular headache which may be relieved by ergotamine tartrate if given early enough. The relief in histamine cephalgia is usually accompanied by a sense of well-being whereas in migraine the patient remains feeling ill and often nauseated. Many vascular headaches, including histamine cephalgia, may also be relieved by applying pressure over the common carotid artery, local pressure over the painful area, immersing the hands in cold water, bathing the face with a cold rag, or by the inhalation of oxygen. Hypertensive headaches are often relieved by acute lowering of the blood pressure whether by smooth muscle relaxants, such as thiocyanate, histamine, or ganglionic blockers. Certain headaches, such as the occipital neuralgic type headache may be relieved by a flushing dose of nicotinic acid. Sometimes relief of the post lumbar puncture headache may be accomplished by this procedure.

ALLERGIC FACTORS

Certain vascular headaches, including migraine, according to Rinkel, are of allergic origin. A frequently noted observation is the statement by patients that since elimination of a certain food the frequency of their headaches is either much less or altogether absent. An allergic factor should always be considered in recurrent vascular headaches under these circumstances: (1) when the patient has pruritus of the nose, roof of the mouth or back of the throat, (2) when the patient awakens out of a sound sleep with a typical exacerbation of symptoms which continue from a few hours up to a three-day period on occasions, (3) when the patient knows that certain foods will precipitate symptoms.

These headaches are frequently not relieved by vasoconstrictors because of the cerebral edema, but relief may be obtained by the use of antihistamines, calcium gluconate or corticosteroids. Allergic studies should be considered in those patients with the onset of headaches early in life, who have frequent irregular attacks, and a family history of headache. The elimination diet recommended by Rinkel will often reveal the offending food.

It should be emphasized that there are conditions under which the allergic reaction may be added to other factors, such as emotional stress, and the combination will produce symptoms. However, elimination of the allergic factor may contribute greatly to the relief of the headache. It must be remembered that allergic reactions, states of autonomic dysfunction, or endocrine imbalance can produce identical clinical syndromes. It should also be mentioned that inhalants can produce allergic headaches, as well as foods, although foods are a much more frequent cause.

DIFFICULT ETIOLOGY

The etiology of certain headaches which are relieved by vasoconstriction of the nasal mucosa is sometimes difficult to evaluate. The fact that many allergic patients with severely swollen nasal mucosa do not complain of headaches has been frequently noted. On the other hand, frequent headaches relief is obtained by shrinkage and cocainization of the contact points from a small septal spur. However, in some cases surgical removal may be necessary to effect relief.

We frequently see patients with unilateral headaches accompanied by nasal obstruction who seem most reluctant to accept a diagnosis other than sinusitis. Most headaches of this type have a vascular etiology. It has been postulated that edema or pressure in the nasal mucosa initiates a reflex reaction which results in dilation of one or more branches of the ophthalmic artery. Relief may be accomplished by vasoconstriction, either topical or systemic, but, if of long duration, relief may be difficult. In these cases, the diagnosis is often difficult to establish and several visits may be necessary for accurate interpretation of symptoms. Treatment early in the attack is often more effective as well as informative. Sinusitis should be carefully ruled out either by transillumination or x-ray for occasionally symptoms similar to a vascular headache will be present.

PAIN OF NASAL ORIGIN

Pain of nasal origin may give rise to a secondary vasodilating headache as well as pain from secondary sustained contractions of the skeletal muscles of the head and neck. Nasal blockage may not be an accompanying complaint but only a complaint of slight stuffiness. By selective anesthetization elimination of any pain arising within the nasal cavity is possible. Most headaches of nasal origin are due to mucosal swelling in areas of the nasal cavity where the anatomic structure is such that a focus of irritation is established. The structural variations usually encountered include

deviations and thickenings of the nasal septum, increase in bulk or displacement of the turbinates, particularly the middle turbinates, and increased volume of the nasal cavity, as in atrophic rhinitis.

NASAL DISORDERS

The doctor is often faced with this problem of dealing with a nose which, because of its anatomic structure, cannot accommodate a certain amount of mucosal swelling without pain being produced. If the nose could accommodate such swelling, there would be no headache. An effort should first be made to prevent mucosal engorgement, but when prolonged treatment is required, as in allergic, endocrine or psychogenic disturbances, it might be prudent to correct such nasal disorders so that when mucosal swelling does occur, headache will not be produced. In some instances a combined method of therapy is indicated.

SURGICAL PROCEDURES

Surgical procedures which may be indicated are: (1) submucous resection which should usually include the ethmoid plate up to the cribriform plate, (2) crushing, fracturing or submucosal resection of enlarged turbinates, and (3) crushing or uncapping of the ethmoidal bulla or cells protruding into the lumen of the nasal frontal duct.

It has been suggested that the relief of pain when the sphenopalatine ganglion is anesthetized might be explained on the basis that there is an interruption of a reflex arc in the sympathetic fibers in the ganglion. Hilger says that cocainization of the sphenopalatine ganglion produces relief only if the spastic arteriolar bed is under control of the sympathetic fibers under blockage, or if sufficient intranasal vasoconstrictor is administered to give systemic absorption and direct constrictive influence on the dilated arterial trunk.

RELIEF OF PAIN

Nasal space headaches may be caused by contacts in the nasal frontal area, middle meatus or between the septum and lateral nasal wall. The pain produced by these contacts is usually acute and rather temporary except that because of abnormal changes in the tissue, repetition of the pain may become more frequent. Relief of pain is accomplished by cocainization or in some instances by simple vasoconstriction. Headache from tension or pressure within a sinus is not uncommon and disappears as the sinus drains or the swelling subsides. A frequent cause of headache which is basically of anatomical origin, but is brought on by vascular changes, is that from a deviated septum in the sphenopalatine area. Here the bone impinges against the turbinates and any mucosal swelling is commonly accompanied by a headache. Relief is obtained by shrinkage and constitutes an indication for a proper septal operation.

We cannot agree with Wolff who states, "If a headache is not associated with turbinate engorgement and inflammation, it is in all probability not the result of disease of the nasal or paranasal structures." Other anatomical causes of headache do exist in the nose. Malformation and malfunction of structures of the external nose permit air that is not properly prepared or conditioned to reach the internal nose. This air then acts as an irritant to the nasal mucosa, which may result in congestion of the mucosa, altered secretions, neurological disturbances, vascular alterations and subsequent headaches. For example, too much space in the nose, which may prevent adequate resistance to air currents, may cause symptoms of vasomotor rhinitis.

TREATMENT

We frequently see patients with symptoms, including headache, ascribed to the wide open side. This type of headache may be relieved by the insertion of cotton into the nostril. If the symptom and subsequent relief are impressive, a rhinoplasty should be considered. If impaction of the septum and tension are present, symptoms will also be referred to the narrow side, and thus to both sides. In this type of nose, excessive exposure and irritation of the anterior ends of the inferior and middle turbinates produce a variety of symptoms which could well be confused with vascular and neuralgic headaches. In the open roof syndrome, in which a defect in the bony or cartilaginous dorsum exists, which may result from injury, disease or surgery, headaches may be relieved by covering the nose with flannel or similar covering, especially at night or when exposed to weather changes.

TENSION NOSE

Tension nose is a term coined by Cottle, which may describe conditions in which one or more anatomical parts of the nose have developed beyond their physiological limits. In the high, long, frequently humped nose with a relatively straight septum so large that it seems to be trying to escape from the nose, headache is a frequent complaint. The headache may be temporarily eased

by bandaging the nose or injecting the valve areas with a local anesthetic, but a rhinoplasty may be necessary to permanently relieve the headache.

If a wide open space syndrome is suspected as a cause of headache, the patient should wear cotton in each nostril day and night for 48 to 72 hours. The cotton is placed in such a manner that it allows the patient to breathe through the nose. It is believed that the effect of the cotton is merely to slow, still, filter the air, and thus to change the air currents. This will aid in determining whether or not surgical procedures are necessary to reconstruct the nose for proper physiological function.

OCULOGENIC HEADACHES

It is difficult to comprehend a statement by Friedman and Von Storck who state, "Our ophthalmologists were unable to incriminate the eyes in over 500 consecutive chronic headaches." Oculogenic headaches are seen daily by most practitioners and are a common reason for the patient's return to his ophthalmologist. Relief of the headache is prompt with the appropriate change in refraction.

Most other articles on headache also tend to minimize the oculogenic factor; but in our experience errors of refraction or small vertical phorias are a very frequent cause of headache. Headache relief may be almost dramatic with the incorporation of a small vertical prism in the prescription. Ciliary spasm headache is brought about by clonism of the ciliary body and may result from refractive errors. Dropping a weak solution of homatropine hydrobromide in one or both eyes, usually at bedtime, together with some sedation will, within a short time, bring about total relief to the patient.

THERAPEUTIC TESTS

Among other therapeutic tests which may aid in establishing the diagnosis of headaches are: (1) the anesthetization of the cornea in unilateral recurrent erosion of the cornea, (2) cervical disc headache relieved by traction, (3) dental origin headache relieved by injection of local anesthetic, (4) headache relief from tubotympanitis by shrinkage of the mouth of the Eustachian tube followed by politzerization, (5) the relief of vacuum sinus headache by inserting a needle into the maxillary sinus allowing air to enter the sinus, (6) the relief of the pain of temporal arteritis by direct pressure over the temporal region of the head or by injection of the artery with procaine, (7) the use of tranquilizers for the relief of certain tension headaches, (8) the relief of the headache of Costen's syndrome by the correction of malocclusion of the teeth, and (9) the relief of conversion headaches and post-traumatic headaches by psychotherapy or hypnosis.

FATIGUE AND HYPOGLYCEMIA

Headaches relieved by the ingestion of food may be due to either fatigue or hypoglycemia. Fatigue headaches usually occur several hours after eating whereas hypoglycemic types usually occur within one to two hours after eating. A glucose tolerance test will confirm the latter diagnosis.

In typical facial neuralgias, vasoconstrictors offer no relief, while surgical or chemical interruption of the nerve is usually successful. Atypical facial neuralgias are characterized by their deep-seated and poorly localized pain which is initially periodic but may likely become continuous. The majority of these patients are female, more clearly suffering from psychoneurotic conversions or compulsive reactions. There is frequently a history of initial pain occurring at the time of a significant event in the emotional life of the patient.

Headaches responding to no remedies are often found with psychogenic states, but every effort should be made to alleviate the pain. Often the patient who at first seemed a hypochondriac will respond to one of the above mentioned therapeutic tests. At the least, the patient should be given the benefit of therapeutic testing before being labeled a psychoneurotic. ★★★

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Staphylococcal Empyema in Infants and Children

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In recent years staphylococcal empyema has become more common in infants and children. It is a dangerous infection associated with pneumonia, marked toxicity, lung abscess, and in some cases tension pneumothorax. The treatment of choice consists of early tube drainage, good supportative therapy, and appropriate antibiotics. The most effective antibiotics are chloramphenicol, novobiocin, and kanamycin.

THE INCREASED FREQUENCY of surface infections due to hemolytic staphylococcus aureus coagulase positive organisms is common knowledge. It is not surprising that there has been an increase also in the incidence of empyema among children due to this organism. Forbes[4] has stated that penicillin has reduced the incidence of pneumococcal and streptococcal empyemas and that 91 per cent of empyemas in children under six months of age are due to staphylococci. This organism was the causative agent in only 10 per cent of the cases of empyemas in children before the use of the sulfonamide drugs.

BOX STUDY

Box[1] performed cultures of the upper respiratory passages in 189 pediatric outpatients at the University of Texas Medical Branch Hospital and obtained cultures which were positive for staphylococcus aureus in 65.6 per cent of the cases.

The pneumonias and empyemas usually represent a spread of the infection from the upper respiratory passages. However, some cases are probably the result of hematogenous spread from a surface infection. Seven out of nineteen cases reported by Haggard[5] had extrapulmonary infections.

CHARACTERISTIC LESION

The characteristic lesion in pulmonary staphylococcal infection[2, 3] follows the anatomical segments of the lung in distribution and is characterized by suppuration, necrosis of bronchial walls, formation of multiple abscesses, pneumatocele, and possible bronchopleural fistulae. Empyema develops and a tension pneumothorax will be seen in some cases.

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These patients are usually quite toxic and the extent of respiratory embarrassment depends on the loss of pulmonary function due to empyema fluid, pneumothorax, or pulmonary infection. There is characteristically abdominal distention with many gas filled loops of small bowel being apparent on the chest roentgenogram (Fig. 1).

DIAGNOSIS

The diagnosis is usually suspected by the roentgenographic evidence of fluid in the pleural cavity. The staphylococcus may be suspected as the causative agent when there is roentgenological evidence[2] of a rapidly changing picture, pneumatocele formation, nontraumatic pneumothorax, and areas of emphysema. Thoracentesis will yield purulent material. Cultures should be done to identify the organisms.

Supportative measures are very important in caring for these patients. Intravenous fluids are given when they are too toxic to take adequate fluids by mouth. Small transfusions are occasionally needed. Enemas and rectal tubes are used as necessary to relieve gaseous distention.

The antibiotics most commonly used in these cases are: chloramphenicol (50 to 100 mg. per

kilogram of body weight for each 24 hours, divided into four equal doses), kanamycin (15 to 30 mg. per kilogram of body weight), and novobiocin (15 to 30 mg. per kilogram of body weight). In infants under four weeks of age chloramphenicol dosage should not exceed 50 mg. per kilogram of body weight.[6]

In cases of staphylococcal empyema, either proven or suspected, tube drainage should be used early. This is very important because of the constant danger of the formation of tension pneumothorax due to ruptured pneumatocele or lung abcess.

CATHETER INSERTION

The insertion of a catheter can be easily carried out through an intercostal space under local anesthesia using a trocar and a 12F or 14F catheter. This should be placed in the most dependent portion of the empyema cavity, usually in the posterior axillary line. The tube is connected to a water trap, and suction is used if there is an air leak. Because of the small calibre of the drainage tube used it requires considerable attention to prevent kinking or plugging. If one tube does not give adequate drainage to the entire empyema cavity, a second catheter is inserted. Rib resection is usually not necessary in these children but may be required on occasions for adequate drainage.

Bronchopleural fistulae are characteristic of the condition and at times air leaks will persist for several weeks. Persistent fistulae and chronic lung abscesses may on rare occasions require surgical resection.[3] Decortication may be required to free a trapped lung that will not expand with adequate drainage. Pneumatoceles will disappear when the infection subsides and do not require resection. Occasionally they persist for weeks or even months.

CASE NO. 1

(Refer to Fig. 1.) M. J. C., white female, age seven weeks, became ill ten days before admission with a slight cough and was placed on tetracycline two days later. Three days before admission she suddenly developed respiratory distress, rapid pulse, and vomited. During a coughing episode the day before admission she became cyanotic and had very severe respiratory distress.

The patient had evidence of minimal respiratory distress on November 27, 1959, when she was admitted. The mediastinum was shifted to the right. The left chest was hyperresonant without breath sounds. Roentgenogram revealed tension pneumothorax on the left with a small amount of fluid in the left costophrenic angle.

Hemogram: Hemoglobin 11.6 gm., RBC 3,-200,000, WBC 13,300, 72 per cent neutrophils, 25 per cent lymphocytes, 3 per cent monocytes.

A 12F catheter was inserted into the left pleural cavity and connected to a water trap. Since we

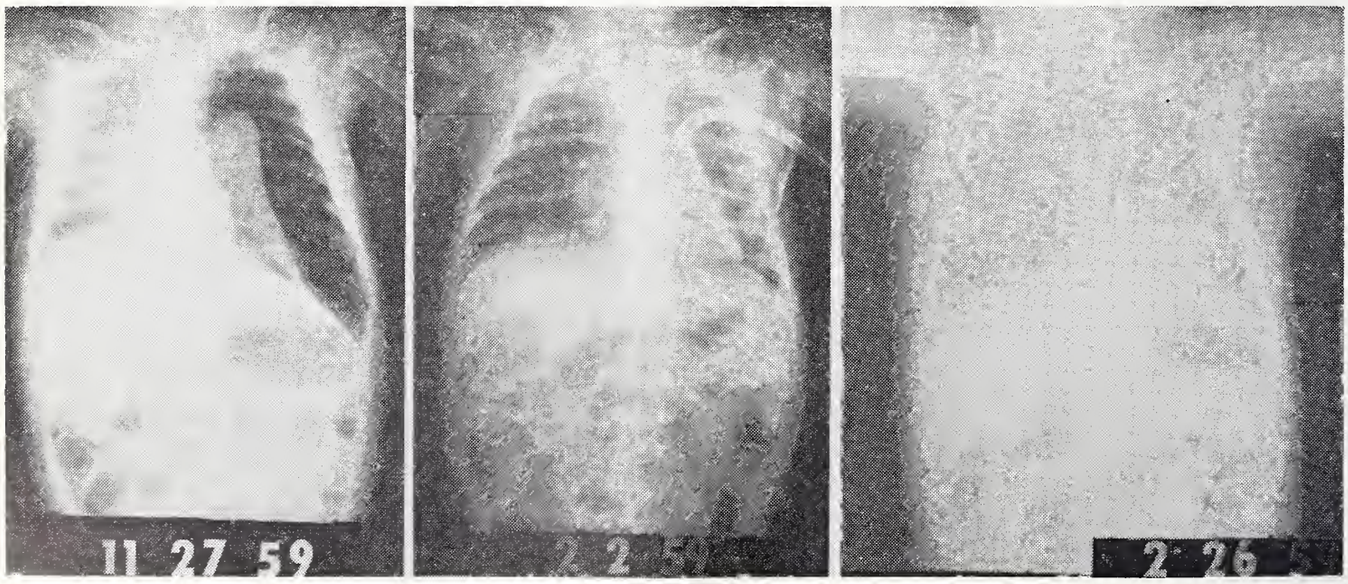

Figure 1. Case 1. On admission November 27, 1959, there was a tension pneumothorax on the left. The lung had re-expanded February 2, 1960, with catheter in place. Note the gas filled loops of small bowel. The roentgenogram February 26 was made 20 days after discharge from the hospital.

were dealing with a tension pneumothorax problem in this cast, it was placed in the third intercostal space using a trocar. The air escaped from the pleural cavity and a small amount of pus was obtained. The left lung re-expanded immediately. Suction was used. The fluid from the chest grew out staphylococcus aureus coagulase positive on culture. This organism was sensitive to erythromycin, chloramphenicol, kanamycin, and novobiocin. It was resistant to terramycin, penicillin, and dihydrostreptomycin.

This patient had excessive tracheobronchial secretion which had to be removed by catheter suction of the trachea on several occasions. Atelectasis of the left lung occurred once on the second postoperative day due to mucus plugging of the left bronchus. The chest tube plugged on one occasion. The lung remained expanded after February 2, 1960, without evidence of an air leak. The catheter was removed on February 6 and the patient was discharged. She was followed by her family physician, and a roentgenogram February 26 revealed the left lung to be normally expanded without evidence of pleural fluid.

CASE NO. 2

(Refer to Fig. 2.) W. D. M., colored male, age seven months, was admitted to the Mississippi Baptist Hospital on November 2, 1959. The patient became acutely ill four days before admission with fever, rapid respirations, and vomiting.

Physical examination revealed temperature 99.4 degrees Fahrenheit (rectally), weight 14 lbs. 7 oz. There was evidence of respiratory distress as shown by a rapid rate, sternal notch retraction, and a grunting type of respiration. The right chest was dull to percussion with absence of breath sounds. The abdomen was protuberant with addominal distention.

Chest roentgenogram with the patient reclining revealed a massive amount of fluid in the right chest and a shift of the mediastinum to the left. The hemoglobin was 8.4 gm., hematocrit 31 volumes per cent.

A thoracentesis was performed and 300 cc. of cloudy fluid was obtained with definite improve-

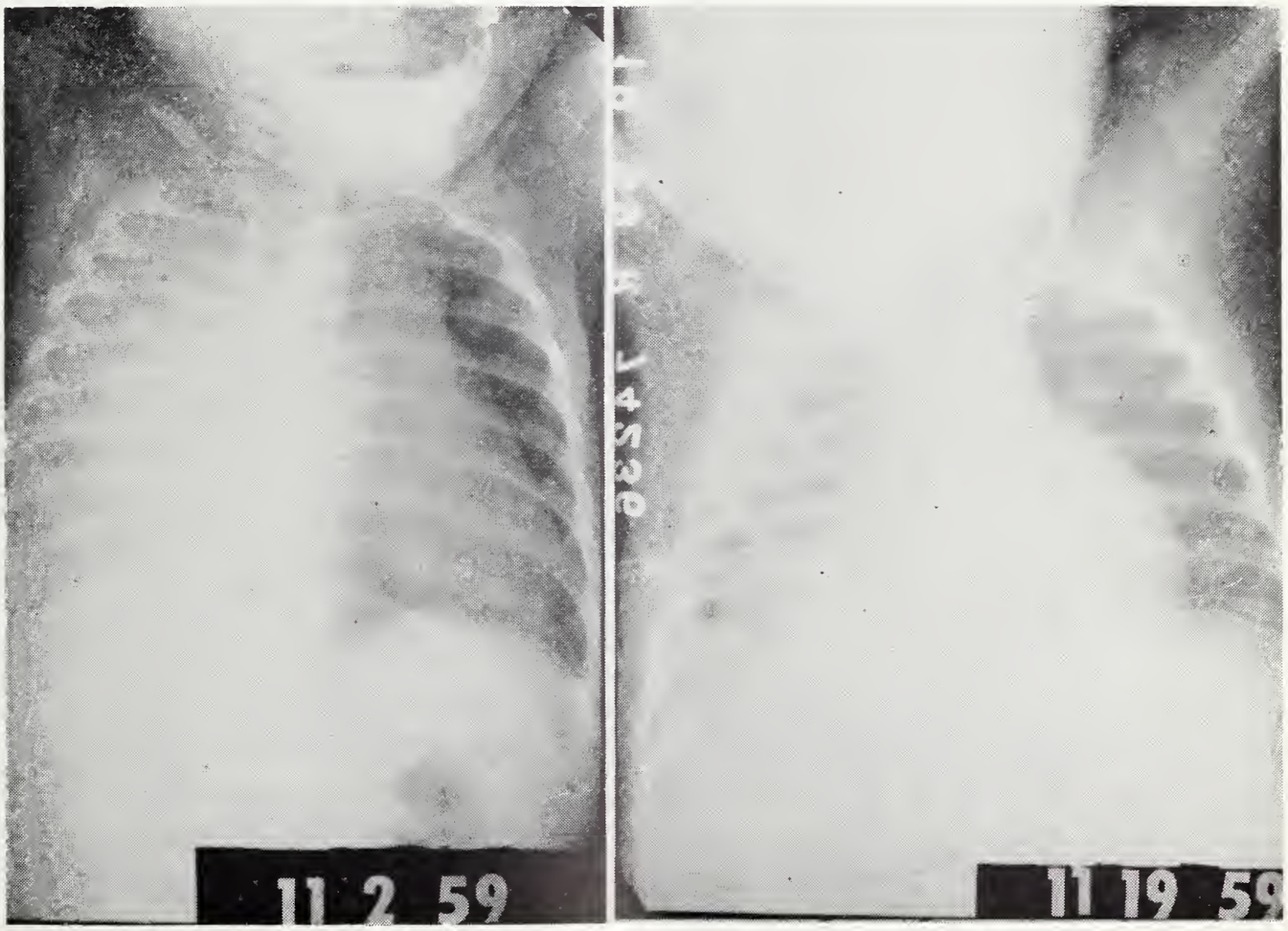

Figure 2. Case 2. Roentgenogram November 2, 1959, was made on admission in reclining position. Note marked shift of the nediastinum. On November 19 the lung was expanded with evidence of residual pleurisy.

ment in respiration. The patient was taken to surgery and a 14F catheter was inserted into the right pleural cavity through the fifth intercostal space under local anesthesia. It was connected to a water trap. Culture of the fluid failed to grow out any organisms.

The patient was placed on kanamycin and penicillin. After a few days the kanamycin was discontinued and chloramphenicol was ordered. A transfusion of 250 cc. of blood was given the day after admission. Intravenous fluids were given the first two days.

The lung expanded fairly well after insertion of the catheter, but the patient had an air leak from a bronchopleural fistula until November 17. The catheter was removed November 24. The patient ran a febril course the first five days he was in the hospital. Enemas were required to relieve abdominal distention on several occasions.

The patient was discharged from the hospital on November 26, and when last seen in the office four days later he was doing well. Recent reports (five months after treatment) indicate the child is entirely well. No follow-up x-rays are available.

SUMMARY

Empyema is still fairly common in infants and children and is often caused by staphylococci. Adequate drainage, antibiotics and supportative therapy are indicated. Two illustrative cases have been presented. ★★★

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HISTORY OF A MEDICAL JOKE

Birth of joke: Dr. John Doe, just in at two a.m. from house call, thinks up joke, chuckles with glee, and makes mental note.

Age eight hours: Dr. Doe tells secretary who laughs uproariously—better to be hypocritical than to boot raise in the works.

Age two days: Dr. Doe's secretary tells it as example of Boss' unfunny jokes to dense secretary of another physician.

Age 30 days: Second physician, who heard it from dense secretary, tells it as opener to scientific paper at medical meeting. Audience laughs—speaker is good source of referrals.

Age three months: JOURNAL MSMA representative who covered medical meeting prints joke because JOURNAL, after all, needs filler.

Age six months: Sixteen other state journals copy, none crediting which suits JOURNAL MSMA just fine.

Age five years: Sixty-three TV and night club comedians copy and use joke. Mrs. John Doe hears and tells physician-husband who has long since forgotten.

Age five years, one day: Dr. Doe tells to physician in hospital lounge who smirks and says, "Old one, buddy, I used that at a medical meeting five years ago.

Etiology and Prevention of Abdominal Incisional Hernia

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The frequency with which abdominal operations are performed today affords frequent and varied opportunities for the development of incisional hernia. The author enumerates certain preoperative, operative and postoperative measures which, if fully utilized, should decrease the chances for development of this distressing complication.

ABDOMINAL SURGERY is being performed with increasing frequency in most hospitals today. For this reason the incidence of abdominal incisional hernia will probably increase until it is second only to groin hernia. All too often, the surgeon, after having carried out a long and tedious abdominal procedure, expends less than a maximal effort to close the abdominal wound accurately and securely. In other situations, the closure is delegated to a less experienced assistant. As with most medical affliction, the best treatment for incisional hernia is prevention. This essay is a consideration of pertinent factors which are deemed important in the promotion of wound healing and prevention of postoperative hernia formation.

OBESITY

Excessive accumulation of adipose tissue constitutes a technical hazard in many ways for the patient about to undergo abdominal surgery. This is especially true with respect to wound closure. The layers of the abdominal wall are often obscured and difficult to identify. Greater tension is exerted upon the fascial suture line as a result of the increased weight. Liquefaction of fat in the wound renders the suture ends much more difficult to handle and knots are often insecurely tied under these circumstances. Poor blood supply of adipose tissue supports wound healing at a subnormal rate. Resistance to infection is poor for the same reason. These circumstances sometimes account for the development of incisional hernia in the obese patient.

When elective surgery is contemplated, reduction in weight of obese surgical candidates constitutes time well invested. Drugs to curb the appetite of these patients are now available and combined with appropriate diet, will usually produce a reduction in weight that will benefit a candidate for surgery.

PROTEIN DEFICITS

A patient who has been chronically ill often presents a state of sub-normal nutrition. Deficiency of protein is almost always an integral part of the picture. The necessity for adequate, available protein supplies in order to promote normal wound healing has been repeatedly demonstrated both clinically and experimentally.[3] The resulting decreased tensile strength of wounds over an extended period of time postoperatively renders these individuals much more susceptible to incisional hernia.

Oral administration of preparations rich in protein is the most effective method of correcting these deficiencies. It may be necessary to insert a feeding tube into the stomach in order to insure adequate intake. When use of the oral route is not possible, much can be accomplished by intravenous administration of blood, plasma and protein hydrolysates.

CONDITIONS REQUIRING SURGERY

Poor wound healing and consequent dehiscence are particularly prone to occur in patients harboring malignant disease. Hypoproteinemia along with

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other possible factors as yet unidentified appear to be responsible. The susceptibility of diabetic patients to wound complications is familiar to all who have had experience with these individuals.

The presence of chronic disease, characterized by poor wound healing, dictates the utilization of

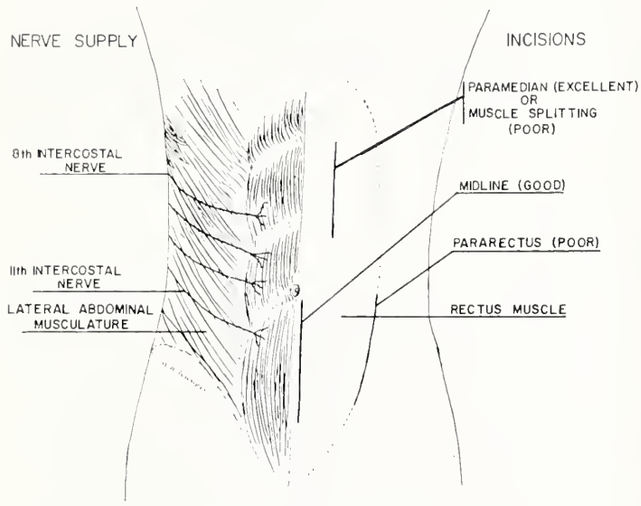

Figure 1. Nerve supply of the abdominal wall.

technical as well as other measures designed to promote wound healing.

VITAMINS

The complex metabolic activities which attend wound healing have as their goal the formation and maturation of fibroblasts with subsequent elaboration of collagen. There is considerable evidence to indicate that this process is materially impaired by vitamin C deficiency. There is also evidence, both experimental and clinical which indicates that a well healed wound may break down with hernia formation following long periods of vitamin C deprivation.[2]

Vitamin C is not toxic and excessive accumulations are readily excreted by the kidneys. The material is also relatively inexpensive. Because of these facts, there should be no objection to the routine use of vitamin C in postoperative patients.

It is especially beneficial to the patient with gastrointestinal complaints where oral intake has been limited. It is our practice to administer 150 mg. of vitamin C three times daily during the period of postoperative convalescence.

Abdominal wall muscles, like all other muscles of the body, lose their tone, undergo atrophy, and wither away following interruption of the nerve supply. The rectus, external oblique, internal oblique and traversus muscles of the abdominal wall receive their nerve supply from the lower six intercostal and first lumbar nerves (Fig. 1). They course obliquely around the anterior abdominal wall in a segmental arrangement to terminate in the rectus abdominal muscle. The surgeon must make his incision in an area where damage to the nerves will be minimal in order to have a strong postoperative wound. Sufficient overlap in innervation probably exists, so that division of one nerve of the abdominal wall will result in no functional impairment. A flail, incomplete abdominal wall will certainly follow the insult of extensive abdominal wall nerve division. Since none of the nerve fibers passes from one side of the abdominal wall to the other, nerve injury does not occur following midline abdominal incision.

INCISION

On the other hand, longitudnal rectus muscle-splitting incisions culminate in denervation of those fibers which are located medial to the site of muscle separation. The para-rectus incision which extends along the lateral border of the muscle can be expected to completely denervate the entire rectus abdominus muscle corresponding to the extent of the incision (Fig. 2). Extension of a McBurney incision up the lateral aspect of the abdominal wall to the costal margin results in denervation of the rectus abdomen muscle as well as those portions of the remaining abdominal wall muscles which lie medial to the line of the incision.

The midline incision is popular and frequently used. It provides ready access both to right and left sides of the abdominal cavity. Technical execution of the incision is easily carried out because of the small number of layers which must be transected. Bleeding is minimal since no muscle tissue is divided. The nerve supply to the abdominal wall

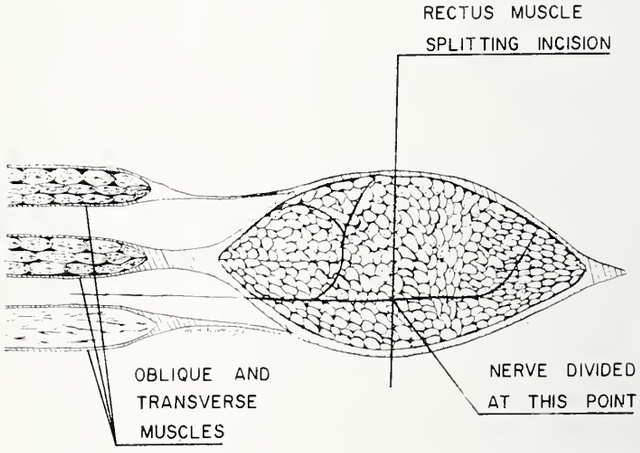

Figure 2A. Effect of rectus muscle splitting incision.

is in no way impaired. Certain of these factors which appear to constitute advantages, in the final analysis, predispose to less secure abdominal wound closure. The posterior rectus sheath extends only half the distance from the umbilicus to the symphysis pubis. Therefore, closure of the lower portion of this wound amounts only to suturing the peritoneum and the fascia of the midline. Lower midline incisions are more susceptible to hernia formation for this reason than are those which are located above the umbilicus.

Para-median incisions probably represent the most secure wounds of all the longitudinal varieties. Effective closure of both anterior and posterior rectus sheaths with interposition of the broad, uninjured rectus muscle is followed by a relatively low incidence of hernia formation.

The McBurney type of gridiron incision represents an extremely effective method of entering the abdominal cavity. Hernia formation is almost unheard of where the incision is made in a technically correct manner and in the absence of postoperative infection.

The incidence of herniation is low following the use of transverse abdominal incision. It appears that tension upon these suture lines is less than that to which longitudinal incisions are subjected. Multiple layers are available for closure, the blood supply is good, and nerve injury is minimal.

DRAINS

Incomplete closure occurs when drains are brought out through abdominal incisions. This allows abdominal viscera or omentum to gain access to the defect and these circumstances materially increase the chances for hernia development.

This complication may be averted by placing the drain through a small stab wound at a site removed from the original incision. This practice incurs no disadvantages and may mean the difference with reference to later herniation.

INTERPOSITION OF VISCERA IN WOUND

Certain techniques in abdominal surgery call for the withdrawal of viscera through the abdominal wound. This includes the establishment of colostomy, gastrostomy and ileostomy, to mention a few. The problem here is to close the wound snugly enough around the protruding organ without excessive encroachment upon its blood supply. The tendency is to err on the side of too loose a closure. This situation often allows a segment of bowel or omentum to prolapse through the defect with later hernia formation.

There is increasing evidence to support the contention that a separate small incision should be made when it is necessary to withdraw viscera from the abdominal cavity.

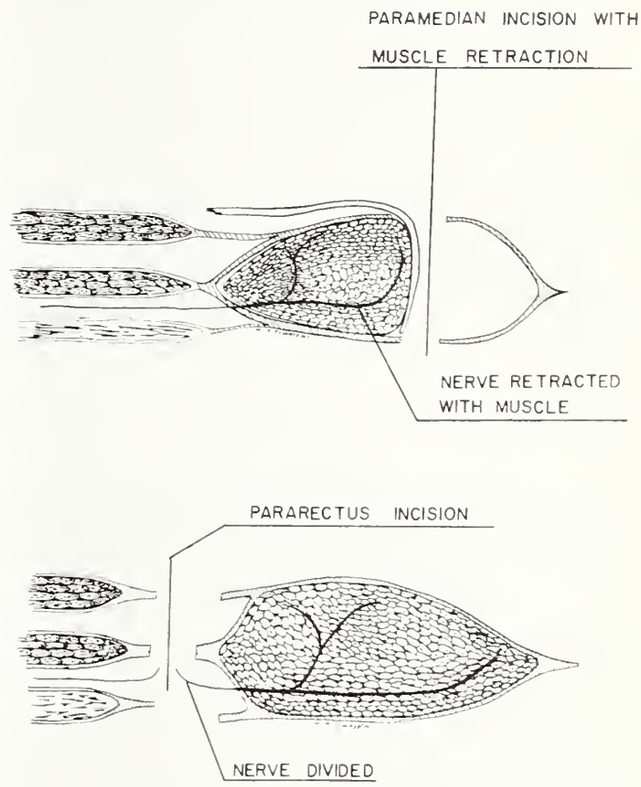

Figure 2B. Effect of paramedian and pararectus incisions.

Where there is the slightest possibility of excessive tension upon an abdominal wound, or where poor wound healing is expected, retention sutures should be used for additional support. We utilize No. 2 braided silk sutures for this purpose. They include the rectus muscle, anterior rectus sheath, subcutaneous tissue, and skin, and are placed about two inches apart (Fig. 3). Care must be exercised not to tie these sutures too tightly because a moderate amount of edema of the wound can be expected. They are usually removed on the twelfth postoperative day.

SUTURE MATERIAL

The problem here involves a consideration of the relative superiority of absorbable versus nonabsorbable sutures. It is probable that the rate of absorption of catgut varies considerable from one individual to another, depending upon local factors such as pH of the wound. This is especially true in the presence of infection. When suture

material disappears too rapidly, undue weakness of the wound may result with subsequent impending hernia formation. It is our practice to routinely close the fascia with interrupted 00 or 000 cotton sutures. The results thus far have been satisfactory.

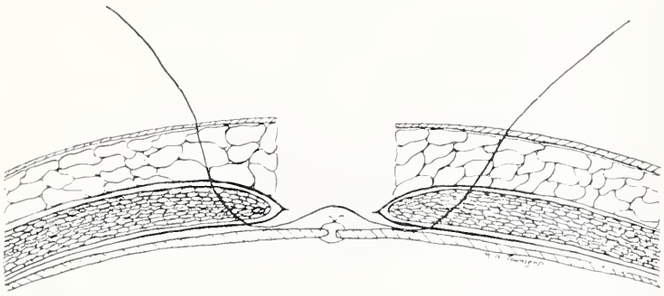

Figure 3. A satisfactory technique for inserting retention sutures.

Many factors are involved in determining the accuracy with which the fascia is closed. When obesity is a problem there may be some difficulty in identifying the precise location of the fascial edges. While it is advisable to clear enough of the fascia in order to make the cut edges readily available, excessive lateral dissection of the fascia is unjustified. Problems involving adequate muscle relation may contribute to the difficulty of fascial closure. Inclusion of the posterior rectus sheath along with the peritoneum during the first layer closure must be practiced if optional wound strength is to be obtained.

HEMATOMA

Meticulous hemostasis speeds wound healing and thereby lessens the chances for the development of complications. Accumulation of considerable quantities of blood under the subcutaneous tissue results in undermining of the tissues with the creation of extended areas of dead space. This situation predisposes to the development of infection.

INFECTION

Wound infection with subsequent abscess formation and tissue necrosis poses the threat of wound dehiscence and hernia formation. Every effort must be exerted to prevent the infection of abdominal wounds. Utilization of the principles of atraumatic surgery, effective hemostasis, elimination of dead space, and the removal of nonviable tissue will aid in lowering the incidence of this complication. When unavoidable wound contamination occurs, such as during open colon surgery, or following exposure to pus from the abdomen, thorough irrigation of the wound should be carried out. We prefer a solution of 200 cc. of saline containing .5 gms. of Kantrex. In many instances it is wise to practice delayed closure of the skin and subcutaneous tissue.[1] The peritoneum and fascia are closed in the usual manner and skin sutures are placed but not tied. A strip of vaseline gauze is placed in the base of the wound (Fig. 4). After 48 hours, the strip of gauze is removed, and the sutures are tied so that approximation of the skin edges is accomplished.

Wound abscesses usually occur between the eighth and fourteenth postoperative days. Prompt drainage of accumulated pus minimizes the extent of damage, and hastens the process of wound healing.

REACTION AFTER ANESTHESIA

Wound disruption from tearing of the peritoneal and/or fascial sutures may result if undue straining, struggling, or vomiting occurs during the period of recovery from anesthesia. This situation seldom occurs following local or spinal anesthesia. Much can be accomplished by the anesthesiologist if measures are instituted to prevent these undue applications of tension to the suture line during the early postoperative period.

Development of severe, persistent cough during the first week after abdominal operation considerably increases the chances for hernia formation. Elective abdominal surgery should be postponed when it is known that the patient has a sore throat or cough before operation. The patient must be encouraged to cough sufficiently to effect satisfactory clearing of mucus from the tracheo-

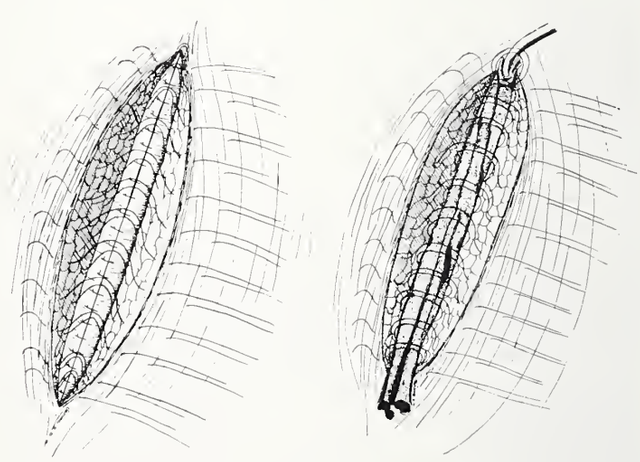

Figure 4. Delayed closure of contaminated wound; (a) skin sutures have been placed (b) vaseline gauze strip left under sutures which are not tied.

bronchial tree. Severe non-productive cough may be minimized by the administration of appropriate cough syrup and lozenges.

ABDOMINAL DISTENTION

Sustained, excessive suture line tension with increased tendency to hernia formation may be expected in those patients experiencing acute abdominal distention during the period of postoperative wound healing. Swallowed air is the major factor in this complication. Postoperative ileus with distention is common following the performance of anastomatic procedures upon the gastrointestinal tract. It is especially prone to occur as a complication of peritonitis. Intermittent episodes of ileus may follow any intra-abdominal procedure.

A valuable prophylactic measure in the prevention of ileus is the insertion of a nasogastric tube with suction. The judicious use of enemata as well as the administration of drugs which stimulate peristalsis may prove beneficial in managing this complication. The Levin tube should not be removed until active peristalsis has returned or preferably until gas is passed per rectum. When the surgeon has used retention sutures, he will experience great comfort during the management of patients who have developed abdominal distention.

SUMMARY

The frequency with which abdominal surgery is performed today provides numerous opportunities for the development of postoperative hernia. A host of factors are involved in the ultimate development of an incisional hernia.

The surgeon must be alert during the pre- and postoperative phases as well as during the operation to the everpresent danger of wound disruption or mal-healing. Persistent vigilance to the basic principles of surgery as outlined above should materially decrease the incidence of incisional hernia.

★★★

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THE HIGH AND THE UNHEALTHY

Happy employees of American business had better watch out for irate, top-blowing bosses, if the advice of DuPont's chief of industrial psychiatry, Dr. Gerald Gordon, is heeded by executives. Says Gordon: "The American business executive is killing himself by being too nice and trying to live up to unrealistic social and economic pressures." As a consequence, they are helping to bring heart conditions, ulcers, colitis, and the like upon themselves by suppressing the normal emotions of anger and fear to keep the hired help happy. To prevent tension in employer and employee alike, Dr. Gordon advises the boss to blow his stack and to stop ". . . striving to make himself over into something allegedly finer and more perfect than the Creator made him."

—*Insider's Newsletter*

Clinicopathological Conference VI

Conducted by the Department of Pathology
University of Mississippi
School of Medicine

Jackson, Mississippi

A 48-year-old female apparently suffering from myocardial infarct is the subject of this CPC. Dr. Watts R. Webb is the discusser. Autopsy report is given by Dr. Catherine Goetz.

THIS 48-YEAR-OLD COLORED female was admitted in a semistuporous state on July 28, 1959. The history that could be elicited was obtained from the family. She had been well up until the day preceding admission when she developed a sudden pain in her chest while sitting on the porch. The pain soon radiated to the left side of her neck and also involved the substernal area. There was a marked dyspnea associated with the pain. Her local physician administered some medication and the pain subsided. The day of admission the patient had been able to swallow small amounts of fluid. About four hours before admission she vomited and soon had the onset of the same severe substernal pain and dyspnea. However, this time she became cold and sweaty. Her local physician gave her 15 mg. of morphine and referred her here. The only past history obtainable was that she smoked four packages of cigarettes daily.

On admission the patient was found to be obese, cold, and sweaty, in respiratory distress, and thrashing about with vigor. Vital signs were: blood pressure 120/100, pulse 120-140, temperature 100.8. The pupils were small and nonreactive to light. Coarse ronchi could be heard throughout all lung fields, but no rales were heard, and several observers felt that no pulmonary edema was present. The size of the heart was difficult to determine but was thought to be enlarged. A paradoxical pulse was present. No murmurs were mentioned. The peripheral pulses were felt in the extremities. Abdominal organs could not be defined. No pedal edema or calf tenderness was present. Neurologic examination was not satisfactory due to the patient thrashing about.

An EKG was unsatisfactory but showed nonspecific ST-T abnormalities. A second EKG was considered satisfactory and showed the same changes. Any x-rays obtained were not reported. The hemoglobin was 12.0 gm., WBC 24,000, C1 107, CO_2 17, and NPN 62. Glucose was 174 mg. per cent but the patient was receiving 5 per cent G/DW. CSF fluid yielded a protein of 33 mg. per cent, glucose 105 mg. per cent, and chlorides were not reported. There were 2 cells/cmm. and both were lymphocytes.

It was the consensus that the patient had incurred a myocardial infarct, and she was treated as such. Medication included morphine, nasal oxygen, and 3 amp. of Levophed in 500 cc. 5 per cent G/DW at about 20 ggts/min. Blood pressure was maintained at 120/80. A nontraumatic lumbar puncture was performed removing 6 cc. of clear fluid. Opening pressure 440, closing pressure 380. She remained in about the same condition throughout the night, but the next morning was more stuporous. An occasional scattered rale was heard in the chest, and the left femoral pulse was decreased. At 10:15 a.m. that day the patient's blood pressure fell and no measures were satisfactory in correcting the deficit. The patient expired at 10:45 a.m., 13 hours after admission.

DISCUSSION

Dr. Watts R. Webb: "In summary, this is an obese, semistuporous, 48-year-old colored woman with a 24 hour history of chest pain radiating to the neck, dyspnea and shock, without pulmonary edema but a very high cerebrospinal fluid pressure. Evaluation of her cardiac status revealed

tachycardia, a very small pulse pressure with an elevated diastolic pressure, pulsus paradoxus, and a noncommittal electrocardiogram.

"While we have no information about her pre-existing physical condition, there are one or two leads. The NPN of 62 is much higher than one would anticipate with a 24 hour history, even with limited intake and vomiting. This, even in the absence of a reported urinalysis, would suggest pre-existing renal disease. In addition, the high diastolic pressure of 100 mm. Hg at the time the patient appeared 'shocky' would suggest that the patient had hypertension with possible nephrosclerosis. With the high elevation of the cerebrospinal fluid pressure, examination of the optic disc would have been revealing though this patient must have been extremely difficult to examine. An elevated cerebrospinal fluid pressure may be due to increased intracranial pressure per se as from a primary or metastatic lesion, CVA, or merely a reflection of an elevated venous pressure. The semistuporous state and the disorientation and restlessness of the patient add little because, again, these could be due to a primary CNS lesion or to anoxia in a patient in shock.

PARADOXICAL PULSE

"Further, a very significant factor concerns the paradoxical pulse with the small pulse pressure but high diastolic pressure. Pulsus paradoxus, while occasionally due to respiratory insufficiency or interference with pulmonary arterial blood flow, is usually due to cardiac tamponade. Here, there is reduced filling of the right atrium and ventricle so that less blood can be pumped into the lung. With this marked reduction in central blood volume, and with expansion of the lung reservoir during inspiration, there is a further reduction of blood return to the left heart which results in a diminished cardiac output and a low pulse pressure. Ordinarily the pulmonary blood volume is sufficient to maintain a relatively normal flow of blood to the left heart during all phases of the respiratory cycle. The compensatory systemic vasoconstriction is reflected by the cold extremities, the sweating and the high diastolic pressure.

"The sudden onset of precordial pain leading to cardiac insufficiency in the obese, hypertensive patient usually means a myocardial infarction. However, coronary disease in the female below the age of 50 is not common unless the ovaries have been removed, and the serial EKG over some 36 hours following initial onset do not support this diagnosis. In addition, except for the diminished cardiac output, there are no true signs of left ventricular failure, particularly pulmonary edema. Cardiac tamponade is rarely a feature of myocardial infarction except with rupture which rarely occurs during the first two days, but usually ten days to two weeks after the infarction. While the cerebral symptoms could be explained by anoxia and shock, myocardial infarction should not cause so elevated a cerebrospinal fluid pressure.

"Some consideration must be given to a pulmonary embolism, as pain, respiratory insufficiency, shock, and even the paradoxical pulse may be produced by interference with pulmonary arterial blood flow. Cyanosis may or may not be present, and is extremely difficult to detect in the melanotic patient. The absence of calf tenderness is not significant, as more than one-half of the major emboli arise in the femoral or pelvic veins. The EKG usually shows acute cor pulmonale and the early symptoms are not totally compatible with this diagnosis.

"In view of the second day's pain following vomiting one would have to consider spontaneous perforation of the esophagus. This, however, would not explain the pain 24 hours previously, and as this patient had no abdominal tenderness, subcutaneous emphysema or mediastinal crunch, this diagnosis does not appear too tenable.

"There is the interesting history of smoking four packages of cigarettes daily—which actually seems incredible. Nonetheless, this does raise the possibility of pulmonary malignancy with cerebral metastases to account for the semistuporous state and the increased cerebrospinal fluid pressure. Cardiac metastases, even without an arrythmia which is the most common symptom of myocardial metastases, could produce the pericardial effusion with tamponade. Again, this is usually a painless procedure. The x-rays are not diagnostic, either as to cardiac size or pulmonary lesions, though the radiologist is at a disadvantage in attempting to obtain a satisfactory roentgenogram by portable technique in an obese, uncooperative patient.

MASSIVE BLEEDING

"Another alternative to be considered is that as always, the cause of shock is massive bleeding. Could the patient have had a perforating peptic ulcer or esophagitis to produce pain and massive bleeding? A low blood volume, however, usually gives a reduction, both in systolic and diastolic pressures, rather than the pulsus paradoxus with a high diastolic pressure. Her hemoglobin was 12 grams per cent which is possible, but not likely in the face of hemorrhage, and this would not

account for the high cerebrospinal fluid pressure. Once again,. to summarize, there is a history of precordial pain radiating to the neck, evidence of cardiac tamponade, and though no differential blood pressures of the arms are given, there seems to be little doubt that as the condition progressed the left femoral pulse became decreased relative to the right. This total picture is best explained by a dissecting aneurysm progressive both down the aorta and retrograde into the pericardial sac, giving rise to cardiac tamponade with the picture of shock and pulsus paradoxus. The dissection must have extended all the way down the aorta, past the visceral vessels and into at least the left femoral artery. This may explain in part the elevation in nonprotein nitrogen if the renal artery were occluded, though again it is anticipated that there must have been pre-existing renal disease. Dissecting aneurysms are much more common in the hypertensive arteriosclerotic patient, and in those patients with Marfan's syndrome. In the hypertensive with cystic medial necrosis, usually there is a split in the media, with the inner portion of the media and the intima being split apart from the external portion of the media and adventitia. Continued pulsation of blood into this space continues the dissection on around the arch of the aorta and retrograde into the pericardium."

Dr. Catherine Goetz: "Thank you, Dr. Webb. This autopsy was performed by one of our surgery residents attached to the pathology service, but he cannot be here today, so I will give the postmortem findings. It seems that the patient was an extremely obese Negro woman. There was no excess fluid in the peritoneal or pleural cavity but the pericardial sac contained approximately 750 ml. of clotted blood. The heart weighed 650 gm. There was hypertrophy and dilatation of both the left and right ventricles. The coronary arteries were patent although there was significant atherosclerosis present. No evidence of either old or recent infarction was evident. The aorta seemed to arise normally from the left ventricle and to pursue a normal course. Upon opening the aorta a dissecting aneurysm was noted to extend for the entire length of the organ ending inferiorly at the bifurcation of the left common iliac artery apparently occluding this artery and down the right common iliac to the bifurcation of the internal and external iliac arteries. The laceration in the intima of the aorta was 2.5 cm. distal to the aortic valve. Dissection had taken place proximally as well as distally, however, it was impossible to determine the exact point of entrance of the tear into the pericardial sac. There was marked atherosclerosis through the aorta.

"The only other findings of note were adenomatous hyperplasia of the left adrenal, arteriolar nephrosclerosis of the kidneys, and acute congestion of the brain and visceral organs.

"The findings we have here are fairly typical of those from death by dissecting aneurysm. Microscopically the aorta showed areas of pale staining mucoid material with the absence of smooth muscle and elastic tissue, the change seen in medionecrosis. It should be pointed out, however, that we see these changes in autopsy material aortas that do not show dissecting aneurysms. I am sure that all of you know that although in most dissecting aneurysms we find a rent in the intima about a sclerotic plaque, there are others in which dissection no doubt begins as an intramural hematoma arising from ruptured vasa vasorum. The findings of atherosclerosis and hypertension are fairly common in patients with dissecting aneurysms whereas syphilis is infrequent in these patients.

"The surgeons have made remarkable strides recently in repairing the atherosclerotic and congenital aneurysms. Does surgery have anything to offer to the patient with a dissecting aneurysm, Dr. Webb?"

Dr. Webb: "Surgery utilized early in this disease can be corrective. Two major approaches have been made. If the site of the dissection starts below the left subclavian artery and has not extended below the diaphragm, this portion of the thoracic aorta can be excised with re-establishment of continuity by insertion of a prosthetic graft. If the dissection starts above this site, a palliative though very effective procedure can be employed. In this the thoracic aorta is transected and the intima and adventitia of the distal aorta are sutured together, effectively closing the defect in the double-barreled aorta. A large window is excised in the intima of the proximal aorta to reunite the intra and extravascular channels. The aorta is then reanastomosed thus allowing blood flowing into the proximal extra luminal channel to return to the single aortic channel inferiorly. This has the effect of preventing further dissection and in addition as the thrust is relieved it prevents extension proximally into the pericardium. Here, as always, the primary emphasis must be on early diagnosis before the dissection has closed off arteries to vital organs or ruptured either externally or into the pericardium." ★★★

2500 North State Street

SPECIAL ARTICLE

A Challenging Decade Ahead

E. VINCENT ASKEY, M.D.
Los Angeles, California

Speaking before the open session of the House of Delegates, Dr. Askey launched a broadside attack on Forand-type legislation. He warns, "Forand legislation is government medicine. It is political medicine. It is socialized medicine, although temporarily limited in scope." Central theme of the address is an appeal to preserve present high quality of medical care through non-federal means.

THE CHALLENGES OF THE SIXTIES. How often have we all seen this title on articles, and heard it introduce speeches in the last few months. I call it a crystal ball title because it has a nice, comfortable time span of 10 years into the future. We can all sit back, contemplate the challenges of the Sixties with no immediate concern because we have a whole decade ahead of us.

Forgive me if I break the spell. The Challenge of the Sixties has left a bundle on our doorstep right now in the form of the Forand legislation. We do not have 10 comfortable years to contemplate this challenge. We cannot talk in the broad time span of "The Sixties." We must think, talk, and act in terms of the immediate now because 1961 may be too late.

I overheard a remark recently on a plane coming from California. Two men were talking about the coming elections, and one said to the other:

"I've practically quit reading newspapers. They're just full of election year doubletalk—a lot of politicians saying anything to get headlines."

People like this who give up election-year newspaper reading missed this item—a declaration by a labor official who said:

"Once the Forand bill is passed, we will come back for more and more—and more!"

They also missed this statement by AFL-CIO President George Meany:

"Widespread support for the proposal in both political parties can be turned into reality if each of the 13½ million members of the AFL-CIO writes to his congressman and senators demanding enactment of the bill."

What is this Forand bill which seems to enjoy such popularity?

The Forand bill, as such, is no longer a serious threat. The Rhode Island Congressman's legislation has not gotten out of committee, and it is not expected to. However, there are many proposals similar in spirit to the Forand bill, which have been termed Forand-type bills.

These proposals would start the government on a compulsory health-care program. Briefly, Forand-type bills would include under social security an introductory amount of health care for those over 65 years of age. Later on, more health care would be added for more recipients, and if we can judge from past experience, more personal income would be deducted for bigger social security payments.

Non-newspaper readers also missed an editorial which said:

"A safe prediction is that the Forand bill would cost more than anybody dares to estimate. The social security program itself now is costing six times the estimates made at its start in 1937. At the present growth, it will not be too long before general taxes will be needed to supplement the social security fund."

President, American Medical Association
Read before the House of Delegates, 92nd Annual Session, Mississippi State Medical Association, Jackson, May 10-12, 1960.

These newspaper items I have quoted have been repeated in spirit all over the country in many publications. They do not represent isolated opinion. They are more than straws in the wind. They are warnings—realistic challenges of the Sixties, and certainly, keeping informed is an important part of meeting challenges.

I know that study and action on meeting the needs of senior citizens is nothing new here in Mississippi. I congratulate your various organizations and groups which are using the community approach without paternalistic direction of federal planners to work out such projects as retirement villages, rehabilitation and convalescent programs, and special training for persons caring for the aged. You are demonstrating that destructive social legislation can best be defeated by a negative approach to the legislation.

I also believe that the American Medical Association has helped this individual effort through its series of nationwide Aging Conferences. At these conferences, aging was discussed with all the challenges, problems, and needs it presents to people who suddenly find themselves classified as "old." The subject was considered in great detail —both the positive, hopeful aspects and the negative, threatening side of the picture.

We examined the physical effects of aging, as well as the mental, psychological, social and economic effects. We showed the urgent need for more jobs for the aged. As a corollary to this, we actively battled compulsory retirement as a blight on an enlightened society.

To drive home the need for society to understand and meet the needs of the elderly, our spokesmen have appeared before civic clubs, service organizations, religious groups and countless other bodies. We have made an enthusiastic effort to awaken public interest in the entire subject of aging. We also have done our best to remind society of its obligations and responsibilities to its senior citizens.

We have called on medical societies and professional groups to give willingly of their efforts to help the aged help themselves. We have spoken out against governmental measures which might endanger the hallowed right of individual, family, home and community initiative.

We have done all this to reach a practical, intelligent solution to the many needs of the aged. We have done this because we want to help—we want to help the elderly of today as well as ourselves when we reach our final years.

Whether or not we have been 100 per cent successful remains to be seen. However, we are by no means finished with this project. The work we have started will continue for years. It must continue! And yet, all our words and actions will be meaningless unless our senior citizens cooperate in this effort.

Personally, I believe they want to cooperate, to help themselves. In fact, this desire on the part of the elderly to be independent and self-sufficient has guided our actions in recent years. We also know that they are unwilling to be pushed into accepting any kind of pseudo-philanthropy with a hidden price tag.

The Forand-type legislation is certainly not a gift for the aged or for those who would pay the the bill in the form of higher social security taxes. It is in my opinion a gimmick to garner votes, to get elected and to stay in office. Experience should teach us that in government that there are already enough gifts and gimmicks.

Forand legislation is government medicine. It is political medicine. It is socialized medicine, although temporarily limited in scope. Under the bill, an agency of the federal government would administer and run the program through compulsory and earmarked taxes. It would determine benefits. It would set rates of compensation. And as we all well know, it is characteristic of such programs that once on the the books they expand. They never contract.

This question has been asked of many doctors: "If any of these bills should pass, will you refuse to participate in any government program?" And a majority of these doctors have replied that they would cooperate with the law of the land.

A British doctor told how this same question was asked of doctors in England before the introduction of the British national health service. The British doctors gave the same reply—that they would cooperate with the law of the land. As a result, the powers behind the national health system plan took this to mean agreement. And the system became law.

If we hold to the general belief of the medical profession that a federalized medical service would decrease the quality of medical service through added pressures, restrictions, and red tape, we cannot stand idly by and see the American physician's service degenerate into an impersonal production-line type of medical care.

No, we cannot think in comfortable, long time span of the Sixties. Our thoughts and voices are needed now to meet this challenge . . . not only for the sake of the old people of today, but also for ourselves when we reach the twilight years. It is our challenge and we must accept it. ★★★

2210 West Third Street

Proceedings of the House of Delegates

92nd Annual Session
May 10-12, 1960
Jackson, Mississippi

What did the House of Delegates do at the 92nd Annual Session? The extensive and varied actions of Mississippi medicine's top policy-making body are presented fully —although not verbatim—as to officers, trustees, and council reports.

THE 57TH ANNUAL SESSION of the House of Delegates, Mississippi State Medical Association, was called to order in the Rose Room, Hotel Heidelberg, Jackson, Mississippi, at 9:05 a.m., by Dr. Stanley A. Hill, President. The invocation was spoken by The Reverend Edwin R. Wilson, Pastor, First Presbyterian Church, Corinth, Mississippi.

The Reverend Edwin R. Wilson: Thou Whose Being is Life, we stand together to worship and to honor Thee. We remember that Thy will, O Father, has ever been the wholeness of salvation for Thy children. We remember that Thy work, O Christ, is for the full healing of the diseases of men's souls and bodies. We remember that Thy ministry, O Holy Spirit, is as the Lord and Giver of Life. We praise Thee more, our God, that in Thee the depths of suffering and death have been transmuted to the heights of life. And that this sting and this victory of death has been swallowed up and given to us in the victory of our Lord Jesus Christ, we give Thee our devotion.

Especially we lift our petitions for these Thy servants, and for all who aspire to heal human ills, that they find as co-operators with Thee the only sure health of being members of the Body of Christ. As Thy expressed concern is in keeping all things whole, keep before them the highest ideals of their heritage and the fairest visions of their youth. Redeem them from all pettiness and undue ambition, that they may be freed to the joy of service. Deliver them from daily drudgery and endue them with delight in their practice of healing. Spare them from pretensions of omniscience and from dignified ingnorance and give them the devotion and the integrity of those who know their life task to be a holy calling. Prevent them from being the hirelings of money by making real to them the full compensation of a divine mission. In all their dealings with the frailties of men make them strong in compassion as under-physicians to Thee. Compound in them the abiding sense of the eternal value of life and the pervading knowledge that in the bodies of men Thou hast chosen the temples of Thine abode.

Now thank we our God from all humanity that through such hands as these we may know more of Thy healing hands, that through such minds as these we may know more of the wholeness of the mind of Christ, and that through such hearts as these Thy compassionate love is made known to men.

Make them blessed with Thy leading. Give them the only benediction of Thy presence in all that they are. In Christ, our Healer, we pray. Amen.

After extending greetings and making prefacing remarks, Dr. Hill introduced the Vice Speaker of the House of Delegates, Dr. B. B. O'Mara, and the Speaker of the House of Delegates, Dr. Lawrence W. Long, and the latter assumed the chair. Dr. William E. Lotterhos, Chairman of the Reference Committee on Credentials, reported that a quorum of registered and seated Delegates was present in accordance with Section 3, Chapter V, By-Laws of the association.

APPOINTMENT OF TELLERS AND SERGEANT-AT-ARMS

Thomas J. Marland, Jackson, Chief Teller and Master Sergeant-at-Arms
Leo O. Stewart, Pascagoula
Rhea L. Wyatt, Holly Springs

ANNOUNCEMENT OF REFERENCE COMMITTEES

Reports of Officers and Board of Trustees
- J. T. Davis, Corinth, Chairman
- L. T. Carl, Jackson
- Eldon L. Bolton, Biloxi
- William A. Middleton, Winona
- E. LeRoy Wilkins, Clarksdale

Medical Practices
- Joseph B. Rogers, Oxford, Chairman
- Verner S. Holmes, McComb
- David B. Wilson, Jackson
- George H. Martin, Vicksburg
- Thomas N. Braddock, Jr., West Point

Miscellaneous Business
- C. P. Crenshaw, Jr., Collins, Chairman
- C. D. Taylor, Jr., Pass Christian
- John G. Archer, Greenville
- George G. Townsend, Forest
- George W. Hicks, Pascagoula

Credentials
- William E. Lotterhos, Jackson, Chairman
- Eugene M. Murphy, III, Tupelo
- Rhea L. Wyatt, Holly Springs

Rules and Order of Business
- Everett H. Crawford, Tylertown, Chairman
- Bobby F. King, Iuka
- L. B. Morris, Macon
- C. W. Patterson, Rosedale
- W. Winston Barnard, Clarksdale

REPORT OF THE REFERENCE COMMITTEE ON RULES AND ORDER OF BUSINESS

Dr. Everett H. Crawford: Your Reference Committee on Rules and Order of Business invites the attention of all Delegates to Chapter V, By-Laws of the association, in which responsibilities and the procedural format of this House are prescribed. It is the purpose of your committee to assist and support the Speaker and Vice Speaker in the orderly and expeditious conduct of all proceedings during this Annual Session.

Business of this House is conducted in accordance with *Robert's Rules of Order, Revised,* and we recommend that the Speaker and Vice Speaker prescribe the order of business so long as such order and agenda are compatible with the By-Laws and with normal custom and usage.

To insure proper recording of the transactions about to begin, it is recommended that all Delegates recognized by the chair be required to identify themselves. We further recommend that unanimous consent of the House be required for extending the privilege of the floor to any non-member of this House of Delegates. To expedite transaction of business, it is recommended that the report of the Reference Committee on Credentials be accepted as the formal roll call and so recorded officially. Further, it is recommended that reporting officers and representatives of official bodies read all or such pertinent portions of their reports as may be deemed necessary to convey full information and understanding.

Your reference committee acknowledges with appreciation the presence of a number of distinguished guests. We recommend that the privilege of the floor be extended to the principal guest speaker, the President-elect of the American Medical Association, and to such other distinguished visitors as may be recognized by the chair.

Your reference committee emphasizes that all reports and resolutions should be referred to the appropriate reference committee by the chair immediately after presentation, except for those which are of such nature as to require no further consideration, debate, or study and are, therefore, ready for decision by vote of the House. We recommend that debate on the floor be reserved until such time as action is recommended by an appropriate reference committee and that all Delegates thus give diligent attention to expediting the business of the House. It is recommended that Delegates attend reference committee hearings and participate in debate at that time.

To avoid burdensome tasks upon the several reference committees and to insure that all members have adequate opportunity to discuss issues before this body, it is recommended that the House permit no introduction of resolutions after the present initial meeting except for (1) matters of emergency nature, such emergency to be determined by a majority vote of the House, and (2) matters relating to a scientific section or section work.

The report of the Reference Committee on Rules and Order of Business was unanimously adopted.

On motion by Dr. H. C. Ricks, second Dr. Lamar Arrington, the Transactions of the 56th Annual Session of the House of Delegates, conducted concurrently with the 91st Annual Session of the association, Biloxi, May 12-14, 1959, were unanimously adopted as published.

REMARKS OF THE SPEAKER

Dr. Lawrence W. Long: Your Speaker is deeply grateful to appear as your presiding officer for the second time and on behalf of himself and the Vice Speaker, the pledge to serve you fairly

and impartially is sincerely renewed. In the same context, it will be our duty to enforce those By-Laws and rules which you have enacted.

Orderly and efficient parliamentary procedure doesn't just happen; it is a result of knowledgeable cooperation and mutual respect. None of you need be reminded that this is medicine's highest deliberative body in Mississippi. What you do here can, has, and will influence the lives of virtually every citizen of our state. Your responsibility is substantial and your duty cannot be accepted lightly. Many members of this House of Delegates are experienced through long years of service and they know that these admonitions are valid and pertinent.

For the benefit of newer members, your Speaker feels it imperative to invite attention to some of the duties of every Delegate:

Attend all meetings of the House and be present in reference committee meetings as interest requires.

Avoid parliamentary gymnastics—more often than not, they confuse the issue. The best parliamentary transaction is the simple transaction, understood by all and reflecting clearly the opinion of each Delegate casting a vote.

Study and familiarize the reports and materials in your folders. These represent a year's work by those to whom you have entrusted the affairs of your profession. If you vote on a proposal without having first familiarized yourself with it, then you are performing a disservice to those who depend upon your vote for representation in this body.

As with most state medical associations, the American Medical Association, and other organizations, a system of reference committees is utilized for debate on business before this House. Every state legislature and the Congress employ the same system. Thus, when a bill is introduced, it is referred to an appropriate committee for hearings, debate, and a final recommendation to the whole body for disposition. Unlike committees of the legislature and Congress, our reference committees have no authority to "kill" matters referred by inaction. Each committee must act on each matter referred.

As reports and resolutions are presented, the Speaker or Vice Speaker will refer these to an appropriate reference committee. Debate will be reserved until the committee meets and appointed times and places of such meetings are published in your programs. This has the salubrious effect of permitting debate while conserving the time of those having other business or no direct concern with the issue under discussion.

The business of the House has been prepared in a concise manner and furnished you in your folders. Although these reports represent hundreds of hours of meetings, work, and decisions in Mississippi and throughout the nation, our efficient organizational structure—which is a servant rather than a master—is such that action is boiled down to the essence for you. We must give diligent attention to every word before us. We are not here to see how quickly we can adjourn but now effectively and efficiently we can discharge our constitutional responsibilities.

In our association as with other groups, the properly accomplished parliamentary procedure sometimes goes almost unnoticed while the infrequently occurring snarl and confusion tends to stay uppermost in our minds. It is the fervent hope of your Speaker and Vice Speaker that all memories and recollections of the 92nd Annual Session will be pleasant and that every Delegate can look back on his participation as a proud accomplishment of service to his colleagues, his profession, and—most important of all—our state and its citizens.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee considered the remarks of the Speaker of the House of Delegates and we endorse his admonitions for parliamentary sincerity and directness in the transaction of our business. We feel that the Speaker and the Vice Speaker have contributed greatly to the fair and expeditious transaction of our business and we commend these officials for their diligent and meaningful efforts.

The report of the reference committee was unanimously adopted.

REPORT OF THE COUNCIL ON CONSTITUTION AND BY-LAWS

Dr. John B. Howell: On May 14, 1959, during the 91st Annual Session, your Council on Constitution and By-Laws concurred in a recommended amendment to the Constitution proposed by Dr. Lawrence W. Long. In his recommendation, Dr. Long proposed that Article VIII of the Constitution be amended by adding the words, "and (5) elected committees, Delegates and Alternate Delegates to the American Medical Association, members of the State Board of Health, and members of the Board of Trustees of Mental Institutions, all of whom must be members of this association." The word "and" now appearing before the words "members of the Board of Trustees and Councils" should be deleted.

The intent of this proposed amendment is to formalize membership in the House of Delegates for certain elected officials of the association as well as for those members who are appointed to the State Board of Health by the Governor on nomination of this House of Delegates and those appointed to the Board of Trustees of Mental Institutions. At the 91st Annual Session, the House adopted the report of this Council in which it was stated that the amendment was concurred in and that it should lie on the table for one year in accordance with Article XII of the Constitution. No amendment to the By-Laws is necessary in this connection.

Your Council on Constitution and By-Laws recommends adoption of this amendment which may be voted upon at this time.

The report of the Council on Constitution and By-Laws was unanimously adopted without referral.

REPORT OF THE BOARD OF TRUSTEES

Dr. H. H. McClanahan: The Board of Trustees is responsible for management and policy direction of all phases of association activity. In the discharge of this responsibility, formal meetings were conducted in May, July, and November of 1959 and during January, February, and May of 1960. On other and intervening occasions, Executive Committee meetings and staff conferences were conducted. This annual report relates to those management and policy actions which the Board deems important to this House of Delegates and the membership.

Journal of the Mississippi State Medical Association

Among all intra-association projects undertaken during the 1959-60 year, none equaled either the scope or complexity involved in implementing the mandate from the House of Delegates to plan, organize, and initiate publication of the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION. This activity was assigned to the Committee on Publications, an *ad hoc* committee of the Board. Frequent and regular liaison was maintained with the committee and policy development was carefully scrutinized. All fiscal aspects of JOURNAL operation are under continuous review. The JOURNAL has received cordial acceptance in the American professional community and is rapidly earning a position of respect among the scientific press. A separate reporting with regard to JOURNAL policy and proposed permanent organization will be made.

Headquarters Building Addition

During the 91st Annual Session, 1959, your Board of Trustees informed the House of Delegates of a need to enlarge our association building and the House endorsed a proposal to authorize construction of an addition if (1) deemed advisable by the Board of Trustees, (2) the necessary alteration and addition could be made within the budget structure of available funds, and (3) no increase in dues were necessary.

At the Board's request, studies were initiated by the original building architect, Jay T. Liddle, A.I.A., Jackson, and after presentation of plans and specifications, a contract was awarded to the best bidder, O. F. Williamson Construction Company, Jackson, to construct a west wing addition of 792 square feet and to alter and remodel 168 square feet in the main building. Work was begun in October and completed on schedule in December. After acceptance by the architect, the Board accepted and approved the addition January 28, 1960.

The new addition houses the Comptroller Department to which are assigned the following responsibilities under the supervision of the Executive Secretary: (1) All general, special, and Medicare accounting, (2) membership, biographical data, and related records, (3) personnel and tax administration, (4) Directory compilation and publication, (5) IBM service, and (6) advertiser-relations, billing, accounting, and circulation for the new JOURNAL. In all respects, the addition exceeds expectations. Construction is splendid and design, outstanding. As an addition, the new wing has resulted in a value appreciation of your building property well in excess of cost.

Actual construction costs, architect's and engineer's fees, and rewaterproofing of the entire structure totaled $11,556.84. This entire amount has been paid in full without loan funds or increase in dues.

Voluntary Retirement Program

In anticipation of enactment of Keogh-type legislation, represented by H.R. 10 in the 86th Congress, the Board directed the Executive Secretary to initiate and develop an association-sponsored program for members designed to utilize fully tax-deferment advantages of the bill. A unique plan was developed under which your Board invited the Deposit Guaranty Bank and Trust Company to act as co-sponsor and trustee. Under this plan, there will be *no acquisition costs* in trust purchases. Profit and savings aspects, flexibility, and protection have been emphasized. Announcement of program details will be made to the membership in the immediate future.

Legislation

The Mississippi State Medical Association has exercised leadership at national level in medical legislative activity. Our association presented formal testimony in opposition to H.R. 4700, the Forand bill, and to Senate Joint Resolution 41, sponsored by Senator Humphrey (D., Minn.) to provide U. S. financial aid for foreign medical research. Your Board assumed the position that the latter program is demonstrably unnecessary since it seems to duplicate the work of the World Health Organization and would neither stimulate nor accelerate private international health activities conducted through (1) commercial organizations having foreign medical operations, (2) medical exchange missions, (3) extensive scientific communication through countless medical journals, and (4) international medical congresses and convocations.

At state level, your Board supported legislative activities related to programs of the State Board of Health, the University of Mississippi School of Medicine, for additional control of narcotics and potent drugs, for prevention of injury from fireworks, improvement of medical care for the indigent, decreasing the professional liability statute of limitation, relief from civil liability in rendering emergency care at accident scenes, and offered advisory opinion and testimony on many health-related measures before the regular session of the legislature.

Medicare

On January 1, 1960, most original care authorities in the Medicare program (curtailed October 1, 1958) were restored and an advantageous contract was renegotiated by representatives of the Board of Trustees for the 1960-61 year. During periods of program restrictions, a 26 per cent reduction in all services occurred, a decrease from 6,382 claims paid to Mississippi physicians during 1958 to 4,734 in 1959. A decrease of $224,000 in disbursements by our Central Office accompanied the claims reduction, dropping over-all program operation below the previous $1-million per year gross transaction bracket. In only two months of operation under the new contract, the program has accelerated about 40 per cent as restored services are again being rendered by Mississippi physicians.

An *ad hoc* committee of the Board supervises claims adjudication and it is important to appreciate that our association represents the membership to the Department of Defense directly, eliminating any third party. Claims are routinely paid in 24 to 72 hours by the Central Office as opposed to the initial 30 to 60 days. This has been made possible through use of the association's IBM system.

Committees of the Board

In addition to the State Medicare Review Board, there are two constitutional and three *ad hoc* committees of the Board of Trustees. These include the Advisory Committee to the Woman's Auxiliary, the Grievance Committee, the Committee to Study Paramedical Training, the Committee on Publications, and the Committee to Study State Income Tax. Additionally, the Councils on Budget and Finance, Medical Education, and the Editorial Council are responsible to the Board. Activities of the former and latter are separately reported.

The Council on Medical Education represents the association in co-sponsorship of the Postgraduate Circuit Course program of the University of Mississippi School of Medicine and the Postgraduate Education Speakers Bureau. The initial circuit program begun in 1959 is considered to have been soundly established and its continuation is recommended. The Postgraduate Education Speakers Bureau is serviced by the Central Office and has been effectively utilized for the second consecutive year as a source of scientific presentations for local medical groups. This program will be continued and extended.

Other Board Activities

Your Board of Trustees has participated in various state conferences and national and regional meetings on behalf of the association. Your chairman served as the association's delegate to the 1960-70 Decennial Meeting of the United States Pharmacopoeial Convention, as a member of the Medicare contract negotiating team, and in connection with national level legislative activity.

Sponsorship of the Fifty Year Club has been assumed by the Board and two physicians were recently elected to membership. The Board has conducted certain medicolegal investigations and assisted in resolution of certain situations involving matters of ethics. Cooperation is being extended in a court case involving opticianary in the Chancery Court of Lauderdale County and the Board has authorized its legal counsel to file a motion to intervene as *amicus curiae*.

During the year, the following have served in elected capacities on the Board as required by the By-Laws: H. H. McClanahan, Jr., Chairman; John B. Howell, Jr., Vice Chairman; and C. D. Taylor, Jr., Secretary. The Board of Trustees has endeavored to discharge diligently and responsibly

all assigned duties. All Board members wish most earnestly to provide dynamic management for continued progress and growth while remaining completely responsive to the desires of the House of Delegates and membership.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee considered the report of the Board of Trustees and because this report treats a number of topics which are disassociated as regards continuity, we ask that we be permitted to consider this report *ad seratim* by divisions in the report.

That section pertaining to the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION is treated separately and your committee prefers to comment in this connection in another portion of the report.

We are grateful for the work of the Board of Trustees and others in expanding the Central Office Headquarters Building and we emphasize the fact that the expansion was carried out without loan funds or increase in dues. The Board of Trustees is commended for making this possible from general funds of the association. We concur in that the expansion was necessary and your reference committee is grateful for the additional flexibility and utility which it furnishes.

Your reference committee reviewed the voluntary retirement program which the Board of Trustees organized in cooperation with the Deposit Guaranty Bank and Trust Company and we feel that this is one of the most important accomplishments of the association during the 1959-60 year. We urge all members to review carefully the brochure which will be furnished in the immediate future and to consider carefully the advantages which will accrue to them in participating in the MSMA-Deposit Guaranty plan should this legislation be passed. Your committee emphasizes that advantages will accrue to each member in that there will be no acquisition costs to trust purchasers and that a program of maximum flexibility and protection has been arranged.

Your reference committee endorses heartily the action of the Board of Trustees in opposing H.R. 4700, the Forand Bill, and Senate Joint Resolution 41, U. S. financial aid for foreign medical research or any similar bill. We feel that the Council on Legislation, under the direction of the Board of Trustees, acted wisely in supporting programs and appropriations for the State Board of Health, the University of Mississippi School of Medicine, for medical care of the indigent, and for control of narcotics and potent drugs during the recent Regular Session of the State Legislature. Particular appreciation is expressed for the positive program of the association and for introduction of bills to provide for relief from civil liability in rendering emergency care at accident scenes and for endeavoring to lower the statute of limitations with respect to professional liability.

Your reference committee commends the State Medicare Review Board, an *ad hoc* committee of the Board of Trustees which is charged with adjudication of Medicare claims and which serves without compensation during approximately 25 meetings per year. Care authorities have been restored in this program and a new and advantageous contract was negotiated during February 1960. Your committee approves these several negotiations and expresses appreciation to the Board of Trustees for the representation it has provided in this program.

Your reference committee considered reports of other committee activities of the Board of Trustees, among which were matters pertaining to medical education. In exploring the report of the Board of Trustees, your reference committee considered the issue of general practice in the University of Mississippi Teaching Hospital. We were particularly fortunate in having the advantage of extensive discussion in this connection, during which time many viewpoints were expressed. Your reference committee appreciates that the problem of staff privileges in a teaching hospital is not easily resolved. We feel that a Department of General Practice is useful and we commend the University of Mississippi School of Medicine for its pioneering efforts in this same connection. We urge that a true Department of General Practice be established. At the same time, we ask all concerned to cooperate vigorously to assist in the creation of a wholesome professional climate and environment which will contribute to final realization of the school's highest potential in teaching and research. In this connection, we urge that continued liaison be maintained between the medical school and those immediately concerned through special and existing mechanisms of medical organization.

The report of the reference committee was unanimously adopted as amended.

SUPPLEMENTAL REPORT OF THE BOARD OF TRUSTEES

Dr. H. H. McClanahan: Your Board of Trusttees has received the first annual report of the Committee on Publications with respect to publi-

cation of the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION which is attached to this report. The Board commends the work of the committee, the Editors, and the staff. It is felt that the JOURNAL is among the most important ventures of the association in its 103-year history.

The Board concurs in the proposal of the committee to expand the Editorial Council to a total of nine members, among which are an Editor and eight Associate Editors. It is felt, however, that only one such member of the Council should be elected from any one association district as is done with the Board of Trustees and most Councils.

Your Board concurs in the recommendation that there be a constitutional Committee on Publications to consist of six members appointed by the Board of Trustees. Among these members would be the Editor and two of the Associate Editors, and three others.

The Board reaffirms its confidence in this important undertaking and urges all members of the association to continue to support the JOURNAL.

FIRST ANNUAL REPORT, JOURNAL OF THE MISSISSIPPI MEDICAL ASSOCIATION, 1960

Although your committee, consisting of Drs. Lawrence W. Long, Jackson, Chairman; B. B. O'Mara, Biloxi; and W. E. Lotterhos, Jackson, has served three years and eleven months since its initial appointment June 20, 1956, this is the first annual report with respect to operation of the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION. From its appointment until May 14, 1959, the committee was an *ad hoc* body of the House of Delegates. Since the latter date, it has been an *ad hoc* body of the Board of Trustees.

Under the Board's direct supervision, your committee was instructed ". . . to proceed to do all things necessary and conduct all necessary negotiations with respect to procurement of national advertising for the JOURNAL. . . ." Further, it was stated that the committee should ". . . additionally proceed to select a printer, study and propose organization of the necessary staff activity, and make other recommendations as may be necessary for publication of the JOURNAL . . ." for consideration by the Board of Trustees.

The purpose of this report is to summarize prior progress reporting to the Board during the 1959-60 association year, to restate concisely prior actions, contracts, and approved policies, and to make certain recommendations with respect to organizational structure designed to insure continuation of a quality publication.

Advertising

Negotiations were undertaken with the State Medical Journal Advertising Bureau, a non-profit corporation domiciled in Illinois, which, prior to publication of JOURNAL MSMA, served 33 journals representing 38 state medical associations with national advertising. On June 7, 1959, during the 108th Annual Session of the American Medical Association, JOURNAL MSMA became the 34th member publication of SMJAB. Response of ethical advertisers has been beyond expectation.

Printing

The Board directed that particular attention be afforded quality production and that use be made of an attractive format. In accordance with instructions, your committee invited bids for printing from five firms, three in Mississippi, one in Alabama, and one in Missouri. These instructions stated that the committee should: ". . . select that printer who can best, in the opinion of the committee, meet and fulfill the needs of the association as regards the JOURNAL. . . ." All firms responded to the invitation, two declining to bid and three bidding. Your committee selected The Ovid Bell Press, Inc., Fulton, Missouri, a large organization devoted to technical magazine and book printing. Service from this contractor has been superior in all respects as the JOURNAL itself attests.

Editorial Policy

The Board of Trustees has stated that JOURNAL MSMA should be conceived and implemented to provide:

(1) A scientific and socioeconomic vehicle especially adapted to the needs of the Mississippi State Medical Association, and

(2) A reliable, authoritative, communications medium among the membership, attractive in format, easily and highly readable, and containing a sufficient variety of presentations and information to achieve wide usefulness.

The Board further stated that the JOURNAL should not be utilized for purposes other than those serving association interests or as a means to create policy or suggest deviation from established policy. Editorially, the Board continued, the JOURNAL should, at all times, reflect accurately and consistently policies of the association as regards goals, programs, and views of Mississippi medicine. Further, as with state association officers, trustees, council and committee members, no MSMA member associated with the JOURNAL should be compensated for duties performed. When necessary travel is performed in behalf of

the JOURNAL, the usual reimbursement should be authorized.

Thus, in accordance with House-stated policy, the JOURNAL should always be an activity of the Board of Trustees. The Board has assigned production and business management, under its supervision through appropriate mechanisms, to the Executive Secretary who has been designated Managing Editor. An Editorial Assistant has been appointed to the executive staff whose qualifications include a degree in English and a master's degree in journalism.

Editorial Council

Presently, the Editorial Council consists of the Editor and two Associate Editors. Joint meetings with this body have been conducted by the Committee on Publications in behalf of the Board of Trustees. As regards this Council, your committee recommends that it be enlarged to provide greater flexibility and service potential but that it remain an elected body of the House of Delegates, responsible to the Board of Trustees. Accordingly, the following amendment to the By-Laws is recommended:

Delete entirely Section 9, Chapter IX, and substitute therefor the following new section:

Section 9. Editorial Council. The Editorial Council shall consist of the Editor and eight Associate Editors, all of whom shall be elected by the House of Delegates. The Editor shall be elected for a term of three years and each Associate Editor shall be elected for a term of two years but the latter shall be arranged so as to provide for election of not more than four annually. Among the Associate Editors, two shall represent general practice, and one each shall represent internal medicine, surgery, preventive medicine, pediatrics, obstetrics and gynecology, and ophthalmology and otolaryngology. The Council, in concert and cooperation with the Board of Trustees or such committees as it may appoint, shall consider for publication in the official journal of the association such scientific essays and materials as may be referred to it and suggest means by which the journal may serve postgraduate and professional education among the membership. The Council shall be responsible to the Board of Trustees.

Committee on Publications

Your committee, recognizing that its tenure expires at the conclusion of the 92nd Annual Session, recommends that a Committee on Publications be created with constitutional status as a committee of the Board of Trustees. The following recommended amendment to the By-Laws, selected from among several alternatives studied by your committee, has been designed as a logical adjunct to that proposed with respect to the Editorial Council:

Add a new and additional section to Chapter X:

Section 4. Committee on Publications. The Committee on Publications shall consist of three members appointed by the Board of Trustees for terms of three years each which are arranged so as to provide for appointment of one member annually, the Editor, and two of the Associate Editors, the latter three being chosen by the Board of Trustees from among those elected by the House of Delegates and the chairman of the committee being designated by the Board. The committee shall implement instructions and policies of the Board relating to the official journal of the association. Additionally, the committee shall study and recommend to the Board policy proposals relating to organization and production of the journal, reporting annually its deliberations. The Editor and the two Associate Editors shall be appointed for periods of not less than one year nor more than three years as regards their tenure on this committee.

The Journal MSMA

With this annual reporting, five issues of the JOURNAL have been published. There are now more than 2,000 subscribers in all 50 states and two foreign countries. It is copyrighted as the property of the association and catalogued in the official literature by the American Medical Association and the National Library of Medicine. It is furnished to the libraries of all 85 accredited medical schools and catalogued in the Library of Congress.

Through five issues, there have appeared 666 total pages among which are 290 scientific and editorial pages and 376 advertising pages. Volume I may now be estimated at about 1,400 pages. Seven to 10 articles are presented in each issue with an average of four editorials and extensive departmental presentations including a president's page, organization and news section, literature review, Auxiliary news, film reviews, letters, personals, the Newsletter, anecdotes and cartoons, reports of new members, and listings of deaths. The JOURNAL content has been expanded more than 200 per cent since the initial issue and it is one of the 10 largest state medical journals published in the United States.

Journal Finances

The JOURNAL has operated as a self-sustaining entity since the first issue published January 1, 1960, the Board having authorized sufficient funds to organize and underwrite the first three issues. These have been restored to the general fund. For accounting purposes, the JOURNAL is now operated as a department of the Central Office. The present advertising rate structure is $67.75 per page with appropriate differentials for color and special orders. Discounts are allowed for multiple insertions within one-year contracts. Office equipment purchased for JOURNAL activities has been capitalized as is done with other association property but charged to JOURNAL revenues. Periodic financial reporting is made to the Board of Trustees and reviewed by the Council on Budget and Finance.

Conclusion

As your present *ad hoc* committee retires by reason of expiration of tenure of service, it can only express profound appreciation to all association officials and many others for understanding cooperation. The JOURNAL has been and will continue to be one of the greatest ventures in the 103 year history of our association. Successes realized have indeed compensated for long hours of meetings, days of out-of-state travel, and lengthy conferences. An additional 500 staff hours per month in the Central Office are devoted to the JOURNAL. Your committee points out as an expression of its own enthusiasm that it has conducted seven meetings in the past ten months during which no member was absent on any occasion.

As individuals and members of the MSMA team, your committee will continue to support and serve this meritorious work in the association's furtherance of scientific medicine and quality care.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee considered the supplemental report of the Board of Trustees with respect to the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION. We feel that the Committee on Publications, the Board of Trustees, and the staff are deserving of unlimited praise in producing this outstanding scientific journal. We point out to this House of Delegates that the prestige of our association has been measurably enhanced through this publication and we express the hope that the present high standards of quality will be continued.

The report of the reference committee was unanimously adopted.

REPORT OF THE COUNCIL ON CONSTITUTION AND BY-LAWS

Your Council considered the Supplemental Report of the Board of Trustees, Subject: First Annual Report, JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION, 1960. We were concerned with those portions of the report in which amendments to the By-Laws were recommended.

That portion of the report entitled Editorial Council was discussed. We feel that this proposal would be unwieldly and would not necessarily contribute to further efficient organization, management, and operation of your JOURNAL. Accordingly, your Council recommends that that portion of the report not be adopted.

Your Council on Constitution and By-Laws also considered that section of the report entitled Committee on Publications. We believe that this recommendation has merit but we offer the following substitute for the original proposal contained in the report:

Add a new and additional section to Chapter X, By-Laws of the association:

Section 4. Committee on Publications. The Committee on Publications shall consist of six members. These shall consist of the Editor, the two Associate Editors, and three others, the three latter being appointed by the Board of Trustees for terms of three years which are so arranged to provide for appointment of one such member annually. The chairman of the committee shall be designated by the Board. The committee shall implement instructions and policies of the Board of Trustees relating to the official JOURNAL of the association. Additionally, the committee shall study and recommend to the Board policy proposals relating to organization and production of the JOURNAL, reporting annually its deliberations.

The report of the Council was unanimously adopted.

REPORT OF THE SECRETARY-TREASURER

Dr. W. E. Lotterhos: Your constitutional Secretary-Treasurer has concluded two years service in his present capacity. As stated last year, this report is again concerned only with duties as secretary since the term of the incumbent treasurer continued through the 1959-60 association year. A separate report by the Treasurer will be submitted to this House of Delegates.

Association membership continues to maintain stability at a four-year average with only minor fluctuations. On December 31, 1959, there were 1,332 members of the association in good standing as opposed to 1,309 in the preceding year. This modest gain was, in effect, a readjustment

to an average level for the period 1957-58. Our total 1959 membership included 1,141 paid members, 120 Emeritus members, 70 members exempt for purposes other than Emeritus. Again, it is pointed out that only living members are counted for reporting purposes on a day-to-day basis where formerly all members in good standing at any time during the year were included in the totals. Actually, this more accurate method of reporting tends to conceal the continuing but modest increase in membership. As of May 1, 1960, there were 1,298 members in good standing for the current year. Among these, 1,096 are paid members, 129 are Emeritus, and 73 are exempt from dues in categories other than Emeritus. From among these 73 members, 46 are exempt by reason of residency training, 6 for military service, 9 in the degree of Associate membership who do pay a service fee of $15, 5 as Scientific members, and 7 for reasons of undue hardship, all because of extended illness and inability to practice. Component societies are urged to exercise the utmost care in approving applications for hardship exemption and reasons therefor must be clearly stated. A summary of membership is attached to this report for the information of the House of Delegates. The association commends the following societies for having enrolled 100 per cent of their renewable 1959 membership as of the reporting date: Amite-Wilkinson Counties Medical Society, Claiborne County Medical Society, Delta Medical Society, DeSoto County Medical Society, East Mississippi Medical Society, Homochitto Valley Medical Society, North Mississippi Medical Society, Pearl River County Medical Society, Tri-County Medical Society, and West Mississippi Medical Society.

Your constitutional Secretary-Treasurer works closely with other general officers, the Board of Trustees, and the executive staff in the Central Office. He serves as an *ex officio* member of all association Councils and committees and is currently chairman of the Council on Legislation and the Council on Scientific Assembly. Additionally, your Secretary-Treasurer is the medical member of the State Medicare Review Board and a member of the Committee on Publications. These several duties require attendance and participation in more than 50 meetings annually. The Secretary-Treasurer is deeply grateful for understanding, cooperation, and support from those with whom he works and every effort will be exerted to continue service through the tenure of the present office.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee considered the report of the Secretary-Treasurer, Dr. William E. Lotterhos, and we express our appreciation to this officer for his generous service to the association in his many capacities. We hope that this House of Delegates will associate itself and our commendation of his activities which include service on many official bodies of the association.

The report of the reference committee was unanimously adopted.

REPORT OF THE TREASURER

Dr. Omar Simmons: In accordance with accepted custom and practice, your Treasurer submits this condensed statement of your association's financial condition as of April 30, 1960, together with pertinent comparative data to assist in assessing 1959-60 fiscal operations. A report of audit was rendered to the Board of Trustees by our independent certified public accountant based upon detailed examination of books and records for the calendar year 1959. Separate reports of audit were rendered in connection with the Medicare program by our accountant and those representing the Department of Defense. The Council on Budget and Finance recently reviewed all reports and records to which reference is made.

The association enjoyed further fiscal growth and greater financial stability during the past year. Long term liabilities were reduced according to approved amortization schedules. For the second consecutive year, the Medicare capitalization was reduced. During 1958-59, this was reduced from $100,000 to $75,000. Last year, a further reduction brought it down to $45,000. This represents a savings in operational costs and a lesser liability for the association. With this and other scheduled reductions, long term liability was reduced about 25 per cent.

Admitted assets are just over $225,000 representing a gain despite this total being some $15,000 less than that reported last year. Naturally, this was influenced by the $30,000 reduction in Medicare capitalization. The association's appropriated and unappropriated net worth is over $119,000, a gain of $15,000 over the preceding year.

During 1959-60, all general and special accounting in the Central Office was transferred completely to IBM operations resulting in a substantial savings of time. Cash requirements have

increased somewhat because of the new JOURNAL which has become the second largest operating department of our Central Office from a monetary standpoint.

MISSISSIPPI STATE MEDICAL ASSOCIATION

Condensed Statement of Financial Condition, April 30, 1960

ASSETS

Current Assets		
General Fund		
Cash on Deposit	$55,244.18	
Due from Department of Defense, Medicare Administration	7,580.70	
Due from Advertisers, JMSMA	13,782.47	
		$76,607.35
Medicare		
Cash on Deposit, Professional Fees	22,807.00	
Due from Department of Defense, Professional Fees	22,193.00	
		45,000.00
Fixed Assets		
Land	13,605.30	
Building and Equipment, Less Depreciation	89,821.43	
		103,426.73
Total Admitted Assets		$225,034.08

LIABILITIES AND NET WORTH

Current Liabilities		
Notes, Building, Current Year	$ 2,236.22	
1960 Unremitted AMA Dues	275.00	
		$ 2,511.22
Long Term Liabilities		
Building	50,833.93	
Advance Medicare Capitalization	45,000.00	
		95,833.93
Deferred Income		
Advance Payments, 92nd Annual Session		7,650.00
Net Worth		
Appropriated Net Worth		
Annual Session Reserve	3,321.31	
Unappropriated Net Worth	115,717.62	
		119,038.93
Total Liabilities and Net Worth		$225,034.08

In all respects, your association is stable and solvent, meeting all usual tests and criteria in these connections. The Board of Trustees has managed our affairs wisely and soundly, observing budgetary limitations established at the 91th Annual Session. Reports of audit and examination reflect proper, accepted accounting procedures, adequate management in the Central Office; and proper handling of all funds.

REPORT OF THE COUNCIL ON BUDGET AND FINANCE

Your Council has carefully examined operation of the association for the 1959-60 year with respect to all fiscal activity. The report of the Treasurer has been compared with the report of the audit performed by the independent Certified Public Accountant and the findings are to the satisfaction of your Council. Prior to this Annual Session, your Council met with all members present and examined pertinent data with respect to the fiscal operation of the association. We have determined that all accounts, receipts, and disbursements are regular and authorized.

Your Council has considered the 1960-61 budget for operation of your association. We have conferred with the Board of Trustees who concur in this connection. Each item of the budget has been evaluated carefully as to necessity, adequacy, and propriety. We recommend a total budget of $739,275.00. This total includes the following sums for purposes stated: (1) For general operation of all departments and activities of the association including all production aspects of the JOURNAL and administrative costs for Medicare, $93,223.10; (2) for building amortization, utilities, maintenance, taxes, and associated expenditures, $12,177.48; and (3) for Medicare professional fees, $600,000.00. We recommend adoption of this amount as being a realistic minimum for continued effective operation of your association.

Our independent certified public accountant surveyed all insurance owned by the association and we have reviewed his report. It has been determined that coverages provided under the direction of the Board of Trustees are adequate. Suitable safeguards for important papers, deeds, and other documents of record have been provided.

The report of the Council was unanimously adopted.

REPORT OF THE EXECUTIVE SECRETARY

Mr. Rowland B. Kennedy: Your Executive Secretary is responsible for conducting the ad-

ministrative affairs of the association and for management of the Central Office. In the discharge of these duties, a close and continuous relationship is maintained with general officers, the Board of Trustees, councils, and committees. Services to these groups include research, studies, records maintenance, speech writing, and publications production. During the 1959-60 association year, staff services of this nature were provided during about 75 meetings and conferences.

As your association penetrates new study and action areas, responsibilities logically accruing to the executive staff have progressively increased. Since the last Annual Session, urgently needed additional work facilities were provided by construction of the new west wing on your Central Office Headquarters Building. Although a new department has been organized, there has been no numerical increase in staff personnel since there was a corresponding reduction in another department during the same period. Completion of our two year conversion program to IBM electronic data processing has increased work capacity without requirement of additional staff members.

Among services to the membership provided under the supervision of the Board of Trustees, the new JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION is noteworthy. Under the direction of the Committee on Publications, your Executive Secretary serves as Managing Editor and is additionally responsible for business management of the publication. Former duties include writing, editing, production planning and control, actual month-by-month organization, and layout of the JOURNAL. A qualified Editorial Assistant has been appointed and this staff member devotes full time to these specialized duties.

Business management of the JOURNAL includes circulation and distribution control, advertiser relations, billing, and accounting. These activities are conducted in the office of the Comptroller. Through five issues of the JOURNAL, publication each month has been promptly on the first day with all copies having been distributed simultaneously. Circulation control and addressing are processed through the IBM system with savings of time and cost. All JOURNAL activities have resulted in additional task time of about 500 staff hours per month.

There have been modest gains in the membership, reflecting stability on a basis of four-year average comparisons. Your association is solvent and financially sound. For the tenth consecutive year, there has been an increase in assets, including the addition to your headquarters building, complemented by a modest gain financially. A desirable fiscal concomitant is a progressive decrease in long term liabilities, all of which results in a gain in net worth. As in previous years, effort has been exerted to manage fiscal planning and financial affairs conservatively while seeking efficiency and economy.

In every respect, your association has become mature, sophisticated, and complex. Significant and noteworthy advance has been made in the quality and depth of socioeconomic studies, impact of legislative testimony, and gain in program effectiveness. In the judgment of your Executive Secretary, association endeavor in the fields of socioeconomics, communications, and legislation are no less important to the Mississippi physician than scientific achievement. The executive staff is grateful for the opportunity to provide supportive services for these activities. Your Executive Secretary is especially grateful to the Board of Trustees and general officers for their generous consideration of problems and needs in the administrative affairs of your association and for their cordial support of these activities.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee considered the report of the Executive Secretary. We concur with his expression of appreciation in expansion of the Central Office Headquarters Building and we commend the executive staff for their energetic and untiring efforts in carrying out the programs of the association. It is our understanding that the Board of Trustees plans to expand the staff and we concur heartily in these plans and urge that the Board provide adequate assistance to the Executive Secretary for his several duties.

The report of the reference committee was unanimously adopted.

REPORT OF THE DELEGATES TO AMA

Dr. J. P. Culpepper, Jr.: As your accredited Delegate to the American Medical Association, it is my privilege to present a summary report of the 108th Annual Session conducted at Atlantic City, June 8-12, 1959. The House of Delegates was in session four days including reference committee hearings. About 30,000 registrants were present to hear more than 450 scientific essays and view 672 exhibits, the largest scientific assembly in medical

history. The President of the United States was the principal speaker during ceremonies devoted to the inauguration of Dr. Louis M. Orr as AMA's 113th President.

Principal issues before the House of Delegates included debate of policy positions on medical care plans, relations between medicine and osteopathy, preparation for general practice, and the ever-present issue of compulsory Social Security for physicians. The Report of the Commission on Medical Care Plans was formally adopted and it will be recalled that each member received this substantial document as a special issue of *Journal AMA*. The House insisted on certain alterations in philosophical viewpoint designed to preserve the principle of free choice of physician. Dr. Lucas, Dr. Twente, and I addressed ourselves to this issue during debate, expressing the views mandated to us by this House of Delegates and our Board of Trustees.

A second major attempt in four years to bring about a professional relationship between medicine and osteopathy was defeated. The AMA Judicial Council expressed the belief that it should be ethical for physicians to teach in schools of osteopathy under stated circumstances but Dr. Frank MacDonald of California and your Mississippi delegation were successful in amending this policy proposal to require in-progress approval of such schools by the Council on Medical Education and Hospitals which, for all intent and purpose, invalidated the policy.

The final report of the Committee on Preparation for General Practice was approved to include a requirement for two years internship. In taking this action, it was stated that one year of intern training actually encourages inadequate preparation for general practice. The suggested program contemplates an 18 months minimum of hospital training devoted to diagnostic, therapeutic, psychiatric, preventive, and rehabilitative aspects of modern medical practice.

Five resolutions were offered on the subject of compulsory Social Security inclusion for physicians. Four seeking this objective were disapproved and one, reaffirming our historic position of non-participation in this undesirable federal program, was approved. Pressure for approval comes mostly from the eastern states.

The House directed initiation of a study on the desirability of providing AMA-sponsored medical scholarships. A number of reports reviewed unprecedented progress in voluntary health care for the aging, while another action authorized the furnishing of four AMA publications as a benefit of membership.

Dr. E. Vincent Askey, Los Angeles, was named President-elect and the 1959 Distinguished Service Award went to Dr. Michael E. DeBakey, Houston, for his work in cardiovascular surgery. Dr. Oscar Creech, Jr., New Orleans, was awarded the Hektoen Gold Medal for his scientific exhibit on surgical treatment of cancer. A total of 21 Mississippi physicians were registered at the Annual Session.

It is the understanding of your Delegates that a primary issue before the June 1960 Miami Beach Annual Session may involve proposals for severe changes in membership authorizations, particularly as regards physicians not in private practice. MSMA policies will be closely followed in voting on all issues and every effort will be made to assure vigorous representation of all association members.

REPORT OF THE DELEGATES TO AMA

Dr. John F. Lucas: As your accredited Delegate to the American Medical Association, it is my privilege to present a summary report of the 13th Clinical Meeting conducted at Dallas, Texas, December 1-4, 1959. The House of Delegates was in session three days including one reserved for reference committee hearings. Your delegation received two specific mandates on issues before this meeting and we are glad to report favorable action on each.

A serious question with respect to relations between physicians and hospitals had been raised as regards exploitation by institutions of pathologists and radiologists. Some 12 resolutions were introduced in this connection, all of which embodied views of the College of American Pathologists and most state medical associations. Debate was lengthy and serious but practice prerogatives and previously established ethical positions were substantially upheld by reaffirmation of the 1951 Hess Report, formally known as "Guides for Conduct of Physicians in Relationships With Institutions." The wording of our own Mississippi resolution with respect to the Hess Report was utilized in the policy declaration. Dr. Lawrence W. Long in his capacity as Chairman of our Council on Medical Service shared the rostrum with your Delegates in presenting our views during debate.

A policy position on Senate Concurrent Resolution 41, international health or foreign aid for research and other projects, was established. Previously, the President of AMA testified in favor of this proposed legislation. The MSMA Board

of Trustees stated that the legislation was unnecessary and our association was, therefore, opposed to its enactment. The AMA House of Delegates took action which amounts to establishing a position of opposition and the legislation is now generally believed to have little chance of passage during the present Congress. Dr. George E. Twente, my alternate, presented our views during debate.

The issue of free choice of physician within the framework of the Commission on Medical Care Plans report was clarified and strengthened. The House approved a proposal for the conduct of relative value studies by state medical associations rather than at national level by AMA and authorized the Committee on Medical Practices to inform each state, through regional meetings and other means, of the purpose, scope, and objectives of such studies.

Miscellaneous actions included approval of a proposal to publish a new guide on the cardiovascular system as part of the special series by the Committee on Medical Rating of Physical Impairment. Adjudication of professional fees for disability determination examinations under Social Security, the House stated, should be between government authorities and the state medical association. A strong protest was voiced against the Veterans Administration, asking for stricter screening of non-service-connected cases. Of course, the policy position is one of opposing this type of care altogether. Medical schools were urged to include in their curricula courses on social, political, and economic aspects of medicine.

The Honorable Sam Rayburn and the Honorable Lyndon Johnson addressed the House and Dr. Chesley M. Martin, Elgin, Oklahoma, was named General Practitioner of 1959. Attendance was light but scientific sessions and exhibits were excellent.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

Your reference committee considered the reports of the Delegates to the American Medical Association. We should like to point out that these officials represent our views at a sacrifice of time and substance. They have effectively carried out our mandates and we commend the Delegates, Drs. Culpepper and Lucas, Alternate Delegates, and general officers who attend annual and clinical meetings of the AMA.

The report of the reference committee was unanimously adopted.

OPEN SESSION OF THE HOUSE OF DELEGATES

The House of Delegates entered upon session during which the following were presented: Dr. E. Hugh Lawson, New Orleans, President, Southern Medical Association; Mr. Robert F. Butts, Birmingham, Executive Secretary-Treasurer, Southern Medical Association; Mr. Charles W. Flynn, Jackson, Executive Director, Mississippi Hospital Association; Mr. Richard C. Williams, Jackson, Executive Director, Mississippi Hospital and Medical Service; Mr. John W. Murphy, Jackson, and Mr. Dewitt G. Crawford, Jackson, Student Delegates from the University of Mississippi School of Medicine.

Dr. B. B. O'Mara delivered the Distinguished Service Oration on the late Dr. Henry Boswell. Dr. E. Vincent Askey, Los Angeles, President-elect, American Medical Association, delivered an address as principal speaker before the 92nd Annual Session.

REPORT OF THE PRESIDENT

Dr. Stanley A. Hill: In making a final report on the association year, may I first say: It has been a genuine pleasure to have served as President. The considerable time, energy, and funds required have been cheerfully given. However, the work could not have been accomplished alone and I am grateful for the cooperation and help of a vast number of our members.

Neither time nor your patience would permit an exhaustive recount of all the work. These accomplishments have accrued as a result of the cooperative work of many members. The staff of the Central Office has been efficient and untiring in all endeavors. With grateful appreciation, I salute all who assisted in these achievements. Just five major attainments will be summarized.

Abreast of the times, the Mississippi State Medical Association has been intensive in legislative affairs. The association sent representatives to Washington, one of whom appeared July 17, 1959, as a witness before the Committee on Ways and Means, House of Representatives, 86th Congress, with respect to H.R. 4700, the Forand Bill. It is significant that Representative Aime J. Forand, Valley Falls, Rhode Island, did not cross-examine our witness.

The nationwide legislative conference of the American Medical Association in St. Louis, October 1-3, 1959, was attended by five representatives from MSMA. As a sequel to the national meeting, the Mississippi State Medical Legisla-

tive Conference was held November 12, 1959, at Jackson, Hotel Heidelberg. The state conference included discussion of then emergent proposals to be introduced in the 1960 Mississippi Legislature, in addition to the Forand Bill and Social Security.

Was anything accomplished? Yes.

When the 180,000 members of the American Medical Association who attend upwards of three million patients daily express their views on legislation both directly and through the public, a powerful influence is wrought. We are fortunate for the exercise of statesmanship by the entire Mississippi delegation in Congress. The Forand Bill was held in committee. In 1959, the prediction was that the Ways and Means Committee stood 9 for and 16 against bringing it to the floor. The actual vote was not taken. After the Second Session of the 86th Congress got underway in 1960, our side gained a vote in Ways and Means. In recent weeks, the Forand Bill was held in committee by a vote of 17 to 8. After this action, Mr. Forand decided to bring his bill on the floor with a "discharged petition." To date, there are 57 signatures on the petition. He has a long way to go because to discharge the committee and bring the bill directly to the floor, a majority of the House membership is required or 218 names. But the struggle is by no means ended.

In the Legislature we have been most fortunate. This reflects the good work of the Council on Legislation and others. A few items of medical interest are tabulated:

The Mississippi State Board of Health received an adequate appropriation—$3,800,000 for the biennium.

The University of Mississippi School of Medicine received a good biennial appropriation $2,550,000 plus $3,000,000 for operating the teaching hospital, and $400,000 for the School of Nursing.

The several amendments to the Workmen's Compensation Law may be expected to benefit all concerned.

The chiropractors did not introduce their bill proving for licensure!

The useless bill requiring human blood for transfusion to be labeled according to the race of the donor died in committee.

The Central Office Headquarters Building was enlarged by the addition of 792 square feet by enclosing the covered parking area. The building project included remodeling of 168 square feet in the main building. The grand total cost was $11,556.84, including $245.00 maintenance (rewaterproofing exterior masonry on the entire building) *all of which was paid for in full* from general funds without increase in dues.

The organization began publication of the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION, the first issue being that of January 1960. The fifth issue (Volume I, Number 5, May 1960) is now out and this quality JOURNAL speaks for itself. Constructive criticism is invited. Financially, this project is in the black.

Mississippi participated in the United States Pharmacopoeial Convention, probably the first time. One of our able members attended the 1960 (decennial) meeting of the U. S. P. Convention at the Statler Hilton Hotel, Washington, March 29-30, 1960.

On February 4, 1960, a Conference of Component Medical Society Leaders was conducted at Jackson. Beneficial discussion of mutual problems, further presentations with respect to legislation, and a major address by the Governor were among program topics of this successful meeting.

Emphasis has been placed on the organization as a functioning mechanism. Extra effort was expended on both the component society and the state association level. It is pointed out with pride the fact that *all sixteen* of the component societies were visited by your President. This was accomplished through the generosity and cordiality of local presidents and state officers in that two and three societies could be visited in one tour. I urge, as a favor to the next President, that three or four societies, and I refer especially to the northern sector of the state, schedule meetings on consecutive days or even at intervals of half days.

Appearance and participation on the component society programs varied from standing for a fleeting moment of recognition (after a 280 mile trip) to the delivery of two discourses, one on a scientific and one on the organization. The dual addresses were delivered at four society meetings.[1]

The single county units should, in all probability, amalgamate with larger adjacent societies. However, it is with profound gratitude that I compliment the three single county units. They are endeared to me because of their unusual hospitality. The first[2] one attended had eight members. All were present and in addition there were three visitors. The next[3] one presented the entire three members plus two visitors. The third,[4] at a called meeting on an off night, presented seven of

[1] DeSoto County Medical Society, Claiborne County Medical Society, Pearl River County Medical Society, and Amite-Wilkinson Counties Medical Society.
[2] DeSoto County Medical Society.
[3] Claiborne County Medical Society.
[4] Pearl River County Medical Society.

its eleven members. Two of these smaller societies[5] tendered Christmas dinners that "were out of this world," the excellence of which was not found or even approached at any of the larger societies—including, if I may say so, the *Northeast Mississippi Medical Society*.

All parts of the association have been functioning; all Councils have worked and all committees have reported. In some instances, there have been members of a Council who have not worked. Should a Councilman not desire to function during the next association year, I respectfully suggest that he discuss the problem with his chairman. If unable to serve for any reason, it will be in the best interest of the association for him to resign. Likewise, this applies to committees.

Of special importance is the fund raising committee of the American Medical Education Foundation. Our group increased the total contributions by about $2,100 over that of the previous year. Maybe we can do better next year.

Although little has been accomplished in comparison with that desired, definite progress has been made. The work of the association is not complete. The opportunity for service is colossal. Therefore, I urge every member to be loyal in cooperation and untiring in support of the incoming President.

The protean aspects of human nature dictate that there will always be a membership problem. Therefore, there should be a perennially sustained effort to correct it. There are very few areas in the state where there is not a membership problem. Teams of two members who would sacrifice the time could bring in most of the eligible non-members. Therefore, in those thirteen component societies where there are eligible doctors outside the organization, I recommend that the team plan be effected.

There is a paramount need for a renaissance of organizational indoctrination in our medical schools. This should begin with the faculty member joining the medical society. Of course, the majority of our medical teachers do set the proper example in this regard, but there are too many who do not. Both medical colleges and medical societies must work as a team. Look at the situation prior to 1910. In that year, the American Medical Association became effective in its standardization work. Since then uniformity has been approached. No longer are there class A, B, or C schools. Now we only have approved medical colleges in the U. S. A.

[5] Claiborne County Medical Society and Pearl River County Medical Society.

Long range planning favors success. Let us make plans for a relatively short period, say one hundred years. Again, I refer to the medical schools for they are the supply of the profession. It will serve our purpose to limit the discussion to our own medical school. Another good stride ahead has been made just this year. All the state owned adjacent land has been conveyed to the medical school by deed. This is most important because it provides for growth.

Concentration in the next several years should remain on teaching. Research is most desirable and will develop with growth of the institution. It is not practical to obtain research buildings without operating funds. The State of Mississippi is in a strain to provide operating funds for the medical school. This should be recognized and we must live within our means.

In planning for the century ahead, the item of prime importance is financing. There is danger of the medical school outgrowing the state's ability to support it. Therefore, I suggest that a sizable endowment be built. It may be a part of the American Medical Education Foundation program. Our AMEF program should be stepped up and advertised more in Mississippi. Let compound interest work for the endowment. It was Benjamin Franklin who said: "Money begets money and its offspring begets more." A growing endowment increased by compound interest will after a hundred years make the college financially independent.

Next, I want to mention something that is all wool and a yard wide—something separate and apart from transportation to the moon or the therapeutic use of isotopes. I refer to the current need for more medical citizens who will become statesmen with able, far seeing, principled conduct of public affairs. There is a paucity of this caliber of medical men in Mississippi. Too many doctors become absorbed in the practice of medicine and do not take sufficient interest in community affairs and civil government. This audience is one of leadership and probably all take an interest in civic affairs. However, I plead that you encourage your medical colleagues to enhance their privilege of citizenship. Yes, by the latter I mean politics, if you please. "Take an interest in politics, lest politics take you." Support capable candidates for public office.

The Mississippi State Medical Association is marching successfully ahead. There will always be problems such as membership and adverse legislative proposals. With the leadership and teamwork that abounds, these obstacles should never become insurmountable nor should we regard the

future with other than confidence. May we always cooperate to the end that the association will progressively enhance in efficiency and service.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF OFFICERS AND BOARD OF TRUSTEES

We considered the report of our President, Dr. Stanley A. Hill. The zeal and energy of this officer are commended. We hope that the several component medical societies share his enthusiasm for our state association and we commend the reporting which he had made to this House of Delegates.

Your reference committee would be indeed remiss if it did not emphasize those aspects of his report pointing out the dangers of the Forand Bill and similar types of legislation which are distinctly inimical to the public health. We concur with the President in that the state association is moving ahead in all respects and we urge this House of Delegates to join us in an expression of respect, esteem, and appreciation for his selfless service.

The report of the reference committee was unanimously adopted.

REPORT OF THE COUNCIL ON MEDICAL SERVICE

Dr. Lawrence W. Long: The Council on Medical Service is an elected body of this House of Delegates consisting of nine members, one from each association district. It has completed two full years of activity since redesignation from committee status. There are nine committees of the Council, eight of which are authorized in the By-Laws and one, appointed on an *ad hoc* basis. Your Council and these nine committees consist of 65 physician-members, three physician-consultants, and three *ex officio* members in addition to members of the executive staff who assist in these several endeavors, among which are the study of all aspects of medical care in Mississippi and the circumstances under which care is provided.

During the 1959-60 association year, the Council and its nine committees conducted 16 formal meetings, approximately 25 staff conferences, and sent representatives to six national meetings. This annual report will summarize the Council's work and highlight for this House of Delegates many hundreds of pages of committee reports and special studies.

Cancer Control

The Committee on Cancer Control consists of seven members and is charged with the responsibility of studying resources, research facilities, and treatment measures for control of cancer. It acts as a liaison mechanism between the association and the American Cancer Society, Mississippi Division. Although the committee initiated no new projects during the present association year, noteworthy activity was conducted with respect to (1) tumor clinics, (2) the cytologic screening program, and (3) programs of the American Cancer Society. Continuing emphasis has been afforded professional education and the committee has followed with interest recent impetus given research on chemotherapy as a means of cancer control.

The association is assisting where possible in the massive six-year study sponsored by the American Cancer Society to determine if cultural, environmental, and socioeconomic factors, personal habits, and ethnic background exert influence on incidence of cancer. The study will involve 500,000 American families in 20 states among which is Mississippi. The study will inquire particularly into factors of possible etiologic significance, especially carcinogenic exposure and habit patterns of personal health as well as medical history.

The committee established effective liaison with the American College of Surgeons Tumor Clinic Registry program. The Council recommends that previously stated policies in the committee's sphere of interest be continued without change and that the present program be pursued within this framework.

Rural Health

The Committee on Rural Health is charged with the responsibility of studying all phases of individual and public health in the rural areas. This committee has been relatively inactive through no fault of the able physicians who have served in appointed capacities as members of this group. There have been no formal meetings of this committee since 1957 and changing, complex patterns as relate to scientific and socioeconomic aspects of medicine have brought about such circumstances as to demonstrate that a vast majority of activities undertaken by this committee are merely duplications of other activities. Continued progress in hospital construction, improved highways and communications, and increased capability among recently trained physicians in the rural area tend to demonstrate that there are basically little or no distinctions between the so-called rural and metropolitan practitioner.

Your Council has considered these findings and recognizing that duplication of effort should be avoided, recommends that this committee be discontinued. Since members of this committee do not vote in the House of Delegates by virtue of

membership alone, no physician would be denied any constitutional privilege by such discontinuance.

Industrial Health

Again, your Council reports with enthusiasm continuation of the vigorous, useful, and imaginative program of the Committee on Industrial Health. This seven-member body, appointed by your Council, examines and studies health problems in industry, labor-management relations regarding health functions, programs of workmen's compensation, employment climates, industrial care plans, and related matters.

Since adoption of the committee's final report in workmen's compensation study, this document has been published in pamphlet form, entitled "Guiding Principles for Medical Aspects of Workmen's Compensation," and has been widely distributed. With publication of this document, the committee concluded basic studies of compensation law and administrative structure which occupied its attention for a period of more than two years. The committee feels that it is logical to undertake studies of rehabilitation of the occupationally disabled as its next major project. In this connection, the committee has endeavored to define this objective and recommends adoption of this definition-statement as association policy:

Rehabilitation of the occupationally disabled includes health services based upon medical and surgical diagnosis, evaluation, and treatment which must be continued beyond acute care stages to the point where the patient enjoys maximum reduction of physical and mental impairment. Services to the disabled in rehabilitation include but are not limited to (1) medical, dental, and necessary paramedical services, supplies, and supervision in treatment of injury and disease, (2) vocational counseling, (3) training or retraining where necessary, (4) transitional employment, (5) placement service, and (6) an opportunity for the rehabilitee to secure again these or similar services necessary in the interest of the same rehabilitative process.

The committee recommends that an official continuing and knowledgeable body of the association be made available to the Mississippi Workmen's Compensation Commission and other administrative agencies to advise and assist with respect to programs on medical aspects of compensation and rehabilitation for the occupationally disabled. Your Council feels that our Committee on Industrial Health should be vested with this function. The committee already possesses authority to appoint such consultants as it deems necessary. In fulfilling this new role, the Committee on Industrial Health will operate under certain stated limitations since it obviously should not become a grievance committee nor should it duplicate functions of existing groups already serving effectively in related areas. Under no circumstances will the committee participate in any proceedings of a judicial nature.

The Council on Medical Service has commended the Committee on Industrial Health for its fruitful and productive work.

Maternal and Child Care

The Committee on Maternal and Child Care continues to conduct regular quarterly meetings during which the study of maternal deaths in Mississippi has been continued. A report of 1957 deaths was published in the February 1960 issue of JOURNAL MSMA. Additionally, illustrative case reports have been published. A study of the 1958 deaths which represented a substantial decrease is being prepared now and will soon be published.

Response from Mississippi physicians to the committee's inquiries regarding maternal deaths continues to be excellent. During the present association year, an overall response of 85.9 per cent was obtained and your Council understands that this is one of the better response rates in the nation. It is presently proposed that findings in maternal death studies will be prepared for IBM electronic data processing in the Central Office and that further useful research findings may be developed from existing information.

The perinatal death study project has not yet been implemented. The chairman of the committee represented the association at an AMA conference in this connection and the committee has stated that a state-wide study of perinatal mortality should not be undertaken at the present time. Consideration is being given to the possibility of establishing a pilot study in connection with the AMA Committee on Maternal and Child Care.

Diseases of the Heart

The Committee on Diseases of the Heart consists of seven members and considered four major projects during the 1959-60 association year. There were:

(1) Investigation of so-called "mercy missions" involving use of National Guard military aircraft for transportation of cardiac patients to distant treatment centers,

(2) Study of funds distribution for specialty care under the Mississippi Crippled Children's Service,

(3) Studies in cooperation with the Mississippi Heart Association to determine suitable means for providing blood for heart surgery patients, and

(4) Study of incidence and mortality of cardiovascular disease in Mississippi.

After consultation with National Guard officials, the committee suggests that military aircraft are essentially unsuited for transportation of the acutely ill. Such aircraft in Mississippi are not usually equipped with oxygen or pressurization systems. Additionally, these aircraft have a minimum of acoustical and thermal insulation, a consideration in transporting the acutely ill. The committee feels that it is equally important to recognize that even sophisticated air crews and travelers may experience air motion sickness unexpectedly and there are psychological and emotional hazards in flying as regards the inexperienced.

The Mississippi Air National Guard now requires that physicians submit a written statement in requesting emergency air transportation to the effect that air travel is the only recommended means of transportation, no air ambulance service is available, required medical treatment is not available locally, and that movement is necessary to prolong or save life.

It is recommended that the association affirm support of Air National Guard regulations with respect to "mercy missions" and suggested that these be strengthened and made more rigorous with respect to establishment of necessity. As in the case of tissue removed at surgery, the opinion of physicians certifying necessity for emergency air transportation should be subject to review by appropriate and knowledgeable representatives of component medical societies. Only in the rarest instances, it is believed, will an emergency be encountered where adequate care cannot be provided in Mississippi.

Regarding other projects considered by the committee during the current association year, information was obtained suggesting that the Mississippi Crippled Children's Service is not placing undue emphasis upon any single service to the disadvantage of other aspects of the program and no further action seems indicated at this time. The Mississippi Heart Association is studying the problem of providing blood for cardiac surgery patients and a program of voluntary procurement of blood is now being developed. There is merit in this objective and it is felt that ample supplies of human blood should be available for such patients at all times.

Cardiovascular disease remains the leading cause of death in Mississippi and information in this connection has only recently been published in the JOURNAL MSMA. The committee reports that the Mississippi Heart Association is enjoying progress in building a special fund with which to establish a cardiovascular chair at the University of Mississippi School of Medicine. Continuing emphasis is being afforded professional education in the cardiovascular field and cardiorespiratory workshops for nurse anesthetists, operating room supervisors, and other paramedical personnel are being organized. Our committee is studying a proposal to organize a pilot work evaluation unit for cardiac patients at the University Teaching Hospital. Your committee feels that there is need to conduct conference with the Mississippi State Pharmaceutical Association and other groups on supply of penicillin for prophylactic treatment of rheumatic heart conditions among indigent patients.

Mental Health

The Committee on Mental Health consists of five members, two of whom represent psychiatry. During the recent association year, the committee has worked to assist the Department of Psychiatry at the University of Mississippi School of Medicine in realizing its fullest possible potential and in the development of its teaching program. The committee has been the principal mechanism of the association in supporting development of a state-wide mental health program and is deeply interested in producing a high degree of stability in a consolidated endeavor to reduce confusion and duplication of effort.

The committee has assisted in the "Milestones to Marriage" program in many high schools of the state. It has maintained liaison with the superintendent of the Mississippi State Hospital, Whitfield, and plans to implement a resolution adopted during the 91st Annual Session authorizing a subcommittee on alcoholism.

Federal Medical Services

The Committee on Federal Medical Services is responsible for examination, inquiry, and study of all federal medical programs rendering care directly or indirectly. Principal studies in this area have been in connection with the program of the Veterans Administration. Your Council reminds this House of Delegates that decisive action was taken during the 1958-59 association year in rejecting a VA-proposed contract for hometown care, the terms of the proposal being unsatisfactory to the association.

There are no recommendations for change in MSMA policy with respect to care in federal medical facilities. It is recommended that the policy adopted in 1959 in which deans' committees are

urged to limit medical school and teaching hospital affiliation to those VA facilities carrying only for service-connected conditions be reaffirmed. Admittedly, the policy is somewhat of an ideal since virtually every medical school has some VA affiliation and non-service-connected patients constitute the bulk of the patient load in these federal facilities.

Aging

The Committee on Aging has concluded one year of service with constitutional status as a committee of your Council. It is comprised of six physicians representing disciplines of surgery, internal medicine, general medicine, orthopedic surgery, and psychiatry. A framework of operational policy was developed and approved at the 91st Annual Session and the committee has conducted its activities in this policy context.

During the 1959-60 association year, the committee completed an inventory of all licensed nursing homes in Mississippi, developing extensive data on each. At present, it is planned to process these data by IBM for presentation to the membership through the JOURNAL MSMA. The committee believes that where low quality nursing home care now exists, the economic law of supply and demand will soon bring about substantial improvement. Action by the Congress to provide FHA-type mortgage loans for private construction of these facilities has been helpful.

The committee continues to work with the Mississippi Hospital and Medical Service (Blue Cross-Blue Shield), the latter having developed a unique catastrophic endorsement for its pioneer over-65 senior medical plan. This now includes a $2,500 cancer endorsement and the Mississippi Hospital and Medical Service is commended for this meaningful improvement. A scientific symposium team consisting of representatives from the fields of orthopedic surgery, psychiatry, surgery, and internal medicine has been selected and component medical societies will have opportunities to hear a presentation by this group on rehabilitative and restorative care of the aging.

The chairman of the committee conducted a selective sample survey among general practitioners on care of patients over age 65 during a two-week time segment. Data from this study are being further developed for application by the committee in its overall program. An extensive public information program was conducted by the committee during the past association year during which speakers were placed before community leadership groups to present the association's views in this field. A representative of the association testified before the House Committee on Ways and Means in opposition to H.R. 4700, the Forand Bill. During the current association year, the chairman, members of the committee, and association representatives have attended both national and regional conferences on aging. A number of MSMA representatives participated actively in the recent Southern Regional Conference on Aging sponsored by the American Medical Association.

The committee recommends that no change be made in basic policy with respect to association action in the field of aging.

Relative Value Studies

The Committee to Study Relative Value Schedules was appointed by the Council during the 1958-59 association year. This is a five-member, *ad hoc* committee of the Council on Medical Service. The committee initiated studies with respect to relative value schedules, advancing certain preliminary findings as a result of initial surveys. Among these are:

(1) Relative value guides do not *per se* fix professional fees but they do assist in removing some aspects of actuarial uncertainty in administration of prepayment and insurance plans.

(2) Relative value guides *may* be a sufficient remedy to many problems of health care financing.

(3) If medical organization ignores the opportunity to suggest relativity guides, then this task will certainly be undertaken by those less qualified.

Additionally, the committee and your Council feels that relative value guides are useful in:

(1) Helping to prevent inequities in insurance and prepayment plans, i.e., over-coverage and under-coverage in the same plan indemnity schedule,

(2) Assisting the public to understand and meet its responsibility to pay for health care and for promoting appreciation of current health care costs, and

(3) Assisting physicians in interpreting values of professional services in economic terms.

Working in close liaison with representatives of the Mississippi Hospital and Medical Service, the committee has devised a reverse conversion relativity study of the Mississippi Blue Shield schedule "J" indemnity plan with emphasis upon intra-schedule relativity. This involves slightly less than 300 procedures which are categorized in accordance with studies made by the California

Medical Association. From this study, it is expected that Blue Shield plans in Mississippi may be greatly assisted. Although the committee had hoped to conduct an over-all relative value study for consideration during the present Annual Session, it was determined that the assignment was one of enormous proportion and available time would not permit completion. The committee has, therefore, decided—with Council approval—that it will continue to work with the Blue Shield project and that additional studies will be devoted to the over-all relative value study. The Council on Medical Service plans to continue this group as an *ad hoc* committee of the Council.

Uniform Claim Form

For a period of about six years, the Health Insurance Council, a composite, representative grouping of insurance trade associations, has been working to develop a single, simplified, uniform claim form for all health and accident insurance. This has been an ambitious undertaking, designed to conserve physicians' time and to reduce paper work volume. For years, the problem of paper work required in preparing insurance claims has been a major concern to the medical profession and insurance companies. The problem has increased rather than decreased because (1) more insurance covering medical, surgical, hospital, and accident care is now in force, (2) more insurance companies have become active in underwriting this coverage, and (3) each company inevitably developed its own claim form, resulting in a lack of uniformity and difficulty for the physician.

The Health Insurance Council, recognizing this problem, has worked with the AMA in development of a uniform claim form. There are now approximately 800 insurance companies in the United States writing insurance in this field and about 75 per cent of these companies have adopted the new form. During 1959, a special report was made by your Council to the membership by direct mail in this connection.

Your Council on Medical Service feels that sufficient progress has been made to warrant adoption of the HIC uniform claim form by MSMA. Accordingly, it is recommended that the House of Delegates approve this proposal and that physicians be urged to utilize this simplified, uniform form. It is further proposed by your Council that a supply source for these forms will be developed offering physicians benefit of mass purchase, thereby lowering the cost of the forms.

Medical Care for the Indigent

Your Council has long been concerned with the state program for medical care of the indigent and has, on many occasions, expressed the belief that the quality of this care should be improved. A fundamental step in this connection is, of course, increasing reimbursement rates to participating hospitals which have been fixed at $6 per day for general medical and surgical cases and $9 per day for cancer cases. The Mississippi Hospital Association recently conducted an extensive legislative campaign in this connection, seeking increases up to $17.50 per day or 75 per cent of costs, whichever is the lesser.

With concurrence by this House of Delegates, your Council developed a plan in which it was proposed that the present $6 per day reimbursement be increased to $10, that the present $10 major surgical operating room fee be increased to $20, and that the present $5 minor surgical service fee be increased to $10. The State Hospital Commission interposed no objection upon being informed of this proposal. Further, your Council proposed permitting use of private hospitals under this program in counties having state-owned institutions where the superintendent of the latter certifies that facilities and equipment are not adequate to provide care required.

A program of liaison with the Mississippi Hospital Association on this legislation was initiated but the latter organization decided to pursue its original goals. Its bill was neutralized for all intent and purpose by disabling amendments and the lack of unity resulted in reenactment of essentially the same program. Your Council proposes to continue its studies and activities in this connection.

Medical Practice

During the current year, a matter of medical practice was brought to the attention of your Council and it was unanimously decided to bring this before the House of Delegates. An insurance carrier was billed for professional services by the University of Mississippi Teaching Hospital which, in its statements, did not name the physician rendering the care. Furthermore, the professional services assignment was made to the University Hospital and a fee for professional services in the amount of $175 (the case in point) was rendered. In the claim form, the authorization to pay the physician was accomplished in favor of the University Hospital. Your Council feels that this procedure has every characteristic of corporate medical practice and appears to be unethical and even possibly illegal.

Miscellaneous Actions of the Council

Your Council continues to work in the area of emergency medical care, placing emphasis upon

natural rather than war disaster. Liaison is being maintained with the AMA Council on Medical Service as well as other appropriate activities at national level. Your Council continues to monitor voluntary health agencies in Mississippi but has no additional recommendations in this latter connection at this time. The Council cooperates with the State Board of Health and has participated in legislative activity of the association by furnishing representatives for testimony and special conferences. Each member of the Council expresses appreciation to the several committees, the Board of Trustees, association officers, and membership at large for assistance and cooperation during the current association year.

REPORT OF THE REFERENCE COMMITTEE ON MEDICAL PRACTICES

Since the report of the Council on Medical Service is concerned with a number of dissociated topics, your reference committee asks that it be permitted to consider this report *ad seratim* as regards the several separately designated sections of the report.

Your reference committee first wishes to comment on the extensive organization of the Council which consists of nine committees, among which are 65 physician-members, three physician-consultants, and three *ex officio* members in addition to members of the executive staff who assist in the endeavors of the Council.

Your reference committee considered that portion of the report relating to the Committee on Cancer Control. We are grateful for the successes realized in establishment of the cytologic screening program and for meaningful liaison with the Tumor Registry of the American College of Surgeons. We concur in the recommendation of the committee that previously stated policies in the committee's sphere of interest be continued without change and that the present program be pursued within this framework.

Your reference committee shares the enthusiasm of the Council on Medical Service for the excellence of work conducted by the Committee on Industrial Health. We concur in and approve the formal definition of rehabilitation of the occupationally disabled which the committee has proposed to the House of Delegates and we feel that a continuing, knowledgeable body of the association should be made available to the Mississippi Workmen's Compensation Commission and other interested administrative agencies to assist with respect to programs on medical aspects of Workmen's Compensation and rehabilitation for the occupationally disabled.

Your committee believes that the work of the Committee on Maternal and Child Care is one of the more important scientific contributions to the activities of the Mississippi State Medical Association. Particular attention of the House of Delegates is invited to the fact that this committee has designed its program and activities schedule in such a manner as to elicit a response of 85.9 per cent from physicians attending women during obstetric deaths. We concur in that the perinatal death study should be implemented with great care and we agree with the recommendations of the committee in this connection.

Your committee considered that portion of the report relating to activities of the Committee on Diseases of the Heart. Interesting discussion before our reference committee was received with respect to the so-called "mercy missions" involving the use of National Guard military aircraft for transportation of the acutely ill to distant treatment centers. We agree that necessity will require such use of military aircraft on infrequent occasions and we feel that care of this nature should be sought in Mississippi.

We approve the committee's activities with respect to finding suitable means for providing blood for heart surgery patients and discussion before our committee indicated that there is a need for additional studies in this area.

We feel that the Council on Medical Service, through such mechanisms as it deems advisable should study existing means for blood supply and procurement, blood banking facilities in the state, and existing policies as applies to all phases of medical practice where a need for human blood and blood fractions exists. We believe that these studies will be useful and we recommend that this suggestion be implemented without delay and that a report be made to the 93rd Annual Session in 1961.

We note that funds distribution for specialty care under the Mississippi Crippled Children's Service are apparently well directed and we urge that the committee continue study of incidence and mortality of cardiovascular disease in Mississippi.

Some concern was expressed by those appearing before our reference committee as regards certain mental health activities in the state. Your committee feels that the Committee on Mental Health of the Mississippi State Medical Association has been able and diligent in the discharge of its duties. It is, however, recommended that liaison with non-medical agencies having a con-

cern in this area be intensified and that the association, through this mechanism, be informed at all times as regards these activities.

Your reference committee reviewed that portion of the Council's report relating to activities of the Committee on Federal Medical Services. We concur that there should be no change in MSMA policy with respect to care furnished in such facilities and we approve the report of the committee.

Your reference committee expresses appreciation for the varied, energetic, imaginative, and resourceful work of the Committee on Aging and we feel that these activities will be beneficial to the senior citizens of our state. We concur in all aspects of the association's action program in the field of aging. It is, however, recommended that a representative from the field of ophthalmology and otolaryngology be appointed to this committee by the Council on Medical Service and we believe that this appointment will strengthen the committee's professional resources and assist in further constructive development of the excellent program which has already been advanced.

Considerable interest was expressed as regards the work of the *ad hoc* committee of the Council in connection with studies in relative value schedules. We concur in the basic premises stated by the committee and we ask that present and programmed studies be continued. It is the understanding of your reference committee, however, that any policy utterance in connection with this activity will be subject to approval by the House of Delegates.

Your reference committee approves and endorses with enthusiasm the proposal of the Council on Medical Service to adopt a uniform claim form for use by physicians in connection with voluntary health insurance. We urge that the Council implement this recommendation at the earliest possible opportunity and that supplies of these forms be made available to all members of the association.

The question of medical care for the indigent has been one in which the association has been deeply interested for many years. We commend the work of the Council in connection with pursuing sound and constructive legislation in this program and we hope that these efforts may be progressively improved. The reference committee feels it appropriate to emphasize to this House of Delegates that professional services under our program are furnished by physicians in Mississippi gratuitously and that no payment for such services is received by any physician.

We reaffirm prior positions of the association in these several connections and urge that the Council pursue these same legislative objectives.

Your reference committee received information relating to certain miscellaneous actions of the Council in areas of legislation, emergency medical service, and liaison with the American Medical Association. None of these matters requires action and your reference committee invites the attention of all Delegates to the excellent work done in these several respects.

The report of the reference committee was unanimously adopted.

REPORT OF THE COUNCIL ON CONSTITUTION AND BY-LAWS

Your Council on Constitution and By-Laws received by referral that portion of the report of the Council on Medical Service pertaining to the Committee on Rural Health. It was pointed out that there have been no formal meetings of this committee since 1957 and changing, complex patterns as relate to scientific and socioeconomic aspects of medicine have brought about such circumstances as to demonstrate that a vast majority of activities formerly undertaken by this committee are merely duplications of other activities. The Council on Medical Service recommended that the Committee on Rural Health be discontinued and points out that since members of the committee do not vote in this House of Delegates by virtue of this committee membership alone, no physician will thus be denied any constitutional privilege by such discontinuance. Your Council on Constitution and By-Laws concurs in this recommendation and feels that it should be approved.

The report of the reference committee was unanimously adopted.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

That portion of the report of the Council on Medical Service entitled Medical Practice was referred to your reference committee. This portion of the report points out a practice of the University Teaching Hospital in which it is stated that an irregular method of billing for professional services was employed on at least one occasion.

The Director of the Teaching Hospital appeared before your committee chairman and stated that this practice has been discontinued and that all billing methods are conducted strictly in accordance with accepted medical practice. Accordingly, your reference committee feels that no further action need be taken in this connection.

The report of the reference committee was unanimously adopted as amended.

REPORT OF THE COUNCIL ON SCIENTIFIC ASSEMBLY

Dr. W. E. Lotterhos: Your Council on Scientific Assembly has completed its second full year of activity since its organization under the revised By-Laws. It is comprised of the six scientific section chairmen and your Secretary-Treasurer and is charged with planning and organization of the association's scientific activity. This includes the formal section programs, the scientific exhibit, the technical exhibit, and coordination of activities of those specialty societies and groups desiring to be identified with the Annual Session of your state medical association.

All members and guests in attendance are encouraged to participate in all phases of the scientific assembly within the spheres of their respective professional interests. Each is urged to visit the technical exhibit and to budget sufficient time to call at each booth and become acquainted with professional service representatives present.

Your Council on Scientific Assembly hopes that the present Annual Session is professionally profitable and personally enjoyable to all in attendance and deep appreciation is expressed for the splendid cooperation received by those of us charged with planning and organizing the Annual Session.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Your reference committee received the report of the Council on Scientific Assembly. We commend the Chairman of the Council, the six scientific section chairmen, and the general officers for their important contributions to the work of your association. We feel that our scientific assembly has been outstanding in all respects and we approve the report of the Council.

The report of the reference committee was unanimously adopted.

REPORT OF THE COUNCIL ON SOCIOECONOMIC AFFAIRS

Dr. Lyne S. Gamble: The Council on Socioeconomic Affairs is an elected body of this House of Delegates consisting of nine members, one from each association district. The Council is charged with the responsibility of studying and inquiring into all socioeconomic aspects of medical practice from broad and inclusive viewpoints. The Council was activated during the current association year and early deliberations were devoted to orientation of the members as to duties, responsibilities, and methods of basic inquiry into fields of study and service.

It is recognized that these secioeconomic studies, unless carefully conducted in selected areas of inquiry, may duplicate work of other groups. As a first major project, your present Council proposes to begin studies on the cost of medical care in Mississippi. It is hoped—and presently programmed—that valid, useful data may be developed with respect to both in-hospital and outpatient care. It is further proposed that particular attention be devoted to hospital care costs with consideration given to demographic, geographic, and other factors as well as to the extent of services rendered in hospitals by size category divisions.

While avoiding duplication of activity presently being conducted in relative value studies, your Council hopes to develop useful information with respect to professional fees and patterns of care as well as the relationship to and importance of voluntary prepayment and insurance plans to the former. Methods of study will include (1) review and evaluation of existing data, (2) surveys where indicated and necessary, (3) conference with representatives of hospital and paramedical organizations, and (4) interpretation of data developed.

In undertaking this project, your Council requests cooperation from all members of the association and, through this progress report, solicits suggestions and comments from this House of Delegates in these several connections.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Your reference committee reviewed the report of the Council on Socioeconomic Affairs. We feel that this new and useful arm of the association has great potential and we approve proposals in the report that certain socioeconomic studies be initiated during the 1960-61 association year.

The report of the reference committee was unanimously adopted.

REPORT OF THE JUDICIAL COUNCIL

Dr. S. Lamar Bailey: The Judicial Council is an elected, standing body of this House of Delegates, responsible thereto, prescribed by Sections 1 and 4, Chapter IX, By-Laws of the association. It was created by the House at the 90th Annual Session and has, therefore, now completed two full association years of activity. The Council consists of nine members, one from each association district, elected for terms of three years each.

Prior to 1958, the judicial powers and authorities of the association were vested in the Board of Trustees; this power is now reposed in your Council whose decision shall be final. Similarly,

this body is responsible for jurisdiction over all questions involving membership, all controversies arising under the Constitution and By-Laws, interpretation and application of the *Principles of Medical Ethics,* controversies between two or more component societies of the association, and among members of the association.

Your Council has endeavored to discharge these duties faithfully, recognizing that it has been and will be called upon to perform delicate and sometimes difficult tasks. It is further recognized that the securing of justice within the letter and spirit of the law is not always pleasant. It is, however, an honorable and moral duty and your Council fully appreciates that exercise of these punitive powers places each member under serious obligation to the public, the medical profession, and to himself.

In organizing for the discharge of responsibilities, your Council has adopted certain procedural rules which are deemed essential to its mission. At all times, the Council must be able to:

(1) Compel the response of any member of the association when necessary.

(2) Prescribe rules of operation for conduct of hearings with the understanding that such rules are reasonable, equally applicable to all, and are administered with consistency, uniformity, and absolute impartiality.

(3) Announce its decisions to all concerned and to others as best serves the public interest and the ideals and goals of ethical medical organization.

The Council believes an accused to be innocent until proof of guilt is clearly and unmistakably established. Until such a finding is made, the rights and privileges of the accused should be vigorously safeguarded while all pertinent evidence is being considered. Among such rights of an accused are the following:

(1) To receive written notification of charges preferred and of the impending hearing.

(2) To be informed of his accuser's identity.

(3) To be afforded sufficient opportunity to prepare a defense.

In hearings of original jurisdiction, the Council feels that certain specific privileges should be guaranteed to all parties at controversy, including:

(1) To appear in person before the Judicial Council during the hearing.

(2) To present testimony, evidence, and witnesses in substantiation of the charge or a reply in defense of the charge.

(3) To have prompt notification of the decision of the Judicial Council.

In hearings of appellate jurisdiction, the Council will not ordinarily admit new evidence because primary consideration is then given to prior observance of law and procedure during the original hearing. Properly, an appellate hearing should include:

(1) Review of all pertinent records of the original hearing.

(2) A determination as to whether the rights of all concerned were respected or violated during the original judicial procedure.

(3) Review of judicial procedures followed during the original hearing as to propriety, completeness, and legality.

When reaching decision after sitting in appellate capacity, your Council feels it should promptly:

(1) Affirm the original decision appealed, *or*

(2) Reverse the original decision appealed, *or*

(3) Set aside as defective any decision by a component medical society of original jurisdiction which contains judicial error, remanding the matter for rehearing.

Appeals from decisions of the Judicial Council may be made to the Judicial Council of the American Medical Association. Thus, the state association's By-Laws providing that your Council's decision ". . . shall be final" should be interpreted as applying to judicial procedure at state level.

During the 1959-60 association year, your Council sat in an appellate capacity on a matter at controversy involving a charge preferred by a member against another of violating regulations pertaining to improper publicity. The appeal was brought by a component medical society. The Council found that local procedure had not been properly observed and that a serious question as to compromise of the accused's rights was apparent.

Your Judicial Council earnestly hopes that its chief function will be that of interpretation and not of hearing charges. It will stand ready, however, to discharge all proper duties in the latter connection. It is anticipated that opinions will be published to the membership from time to time and questions may be referred to this body for interpretation by any member, component medical society, official body of the state association, or source having a valid interest in the question.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Your reference committee considered the report of the Judicial Council. We commend the work of this body and approve procedural rules adopted for conduct of the judicial affairs of the association.

The report of the reference committee was adopted as amended.

REPORT OF THE COUNCIL ON LEGISLATION

Dr. W. E. Lotterhos: Your Council on Legislation is elected by the House of Delegates in accordance with Section 7, Chapter IX, By-Laws of the association. During the 1959-60 association year, no subject before the medical profession exceeded legislation in importance. Indeed, proposals before the 86th Congress with respect to federal health programs are such as to pose the gravest and most urgent situation yet faced by medical organization in the United States.

For the third consecutive year, Forand-type legislation, federally controlled surgical and hospital care of Social Security beneficiaries, was before the Congress. It is generally agreed that this legislation represents the final step in the piecemeal federalization of traditional American medical practice patterns.

From the beginning of the Second Session of the 86th Congress through the writing of this report, H.R. 4700, the Forand Bill, and related measures remain in committee. In July 1959, our association was privileged to present testimony against this legislation and an intensive campaign has been conducted during the past six months by the association in this particular connection. In November 1959, a special State Legislative Conference was conducted at Jackson on this subject.

This problem is by no means resolved and the association must expect that this will be a continuing threat to private medical care requiring progressively greater effort on the part of all physicians in their activities to provide quality medical care under a private system and in programs of opposition to this particular effort. Your Council recommends that this House of Delegates again reaffirm its total and complete opposition to this and related legislative proposals.

Subsequent to the 91st Annual Session in 1959, the Board of Trustees assumed a position of opposition to Senate Joint Resolution 41, financial assistance to foreign medical research. Pursuant to the mandate of the Board, written testimony was presented against this proposal and, at the December 1959 AMA Clinical Session at Dallas, the House of Delegates substantially altered the previously expressed position of support by the President of the American Medical Association. Other issues at national level have been followed closely and representatives of your present Council, Trustees, and general officers have participated in national level legislative activity. Dr. George E. Twente, Jackson, continues to serve as a member of the AMA Council on Legislative Activities.

During the 1960 Regular Session of the State Legislature, a number of health-related measures have been carefully monitored by your Council. Among these were a proposal to provide for mandatory labeling of human blood by race which we opposed. A similar bill was defeated in committee during the 1958 Regular Session.

No position was assumed with respect to mandatory immunization of children against poliomyelitis although the association has made it widely known that it supports universal use of the Salk vaccine.

Testimony was presented in support of a measure to place additional controls upon illicit and improper dispensing of narcotics and we expressed a position of support for restriction of sale of fireworks as a means of assisting in prevention of injury and death.

The association's plan for medical care for the indigent which contemplated an increase in the State Hospital Commission reimbursement rate for hospitals and utilization of private hospitals in counties having state institutions under given circumstances was presented in the House of Representatives. The Mississippi Hospital Association sought a greater increase with mandatory participation by counties in an even match of funds. At the time of preparation of this report, proposals in this connection were pending to provide (1) reenactment of the 1958 biennial appropriation in the amount of $1,500,000 with no increase in *per diem* reimbursement rates, and (2) a heavily amended version of the Mississippi Hospital Association program.

Your association sponsored two measures before the current Regular Session, submitting written testimony in support of each. One provides for relief from civil liability when rendering emergency care in good faith at the scene of an accident. The other sought a reduction of the professional liability statute period from six to three years.

Your association assumed no formal position with respect to appropriation of funds for additional medical facility construction in Mississippi but did support Budget Commission-approved appropriations for operation of state public health, medical education, and charity care programs.

A package of eight proposals on Workmen's Compensation was sponsored by employer organizations. Five have been enacted with some amendments. Basically, these were aimed at defi-

nition, construction, and administration of the law. Our Committee on Industrial Health expressed the belief that objectives of the bills fell short of association goals in this connection.

During the current association year, many physicians assisted greatly in the over-all legislative effort of your association. The Council is deeply grateful to those members who responded so effectively and promptly to our requests to communicate with Congress and local leaders. In some instances, however, there were unilateral actions apparently expressed in the name of the association where prior policy authorization did not exist. Actions of this nature should be carefully coordinated with your Council on Legislation to assure policy consistency and maximum effectiveness of our unified effort.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Your reference committee considered the report of the Council on Legislation. We especially commend this Council as well as members of the Board of Trustees and general officers for their energetic, diligent, and effective work in the legislative affairs of this association and we urge that these constructive activities be continued.

We invite particular attention of this House of Delegates to the final paragraph of the report where it is stated that there were some unilateral actions with respect to legislation apparently expressed in the name of the association where prior policy authorization did not exist. Your reference committee suggests strongly that all having an interest in legislative affairs coordinate any proposed activities most carefully with the Council on Legislation.

The report of the reference committee was unanimously adopted.

REPORT OF THE COMMITTEE ON AMERICAN MEDICAL EDUCATION FOUNDATION

Dr. W. E. Caldwell: Your Committee on American Medical Education Foundation was appointed by the President after the May 1959 state meeting. The committee consisted of 16 members, one from each component medical society of the association. The objectives of the committee are: One, to educate the physicians of Mississippi concerning the program of the American Medical Education Foundation and its contribution to the medical profession, and second, to encourage Mississippi physicians to participate in the program.

During October 1959, your committee met in Jackson and formulated its program. A "Winter Campaign" was held during November and December 1959. Contributions were encouraging even though the total amount was small. The number of contributors in 1958 was 138, giving $3,033.36. This increased in 1959 to 194, giving $5,180.50. The number of members of MSMA contributing was only 18 per cent.

The committee feels all future campaigns should be conducted as much as possible on the local society level. Direct mail from the national office and MSMA office should be used as necessary. To conduct a campaign on the local level, the committee deems it necessary that members of the committee should serve longer than one year and should serve staggered terms. This would assist the committee in educating Mississippi physicians about the AMEF program.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Your reference committee considered the report of the Committee on American Medical Education Foundation. We commend the chairman, Dr. W. E. Caldwell, Baldwyn, for his energetic and effective work and we note with pride and pleasure that the association's participation in this valuable program increased substantially under Dr. Caldwell's leadership. We also commend the members of his committee who worked at the local society level and we approve the report as amended.

The report of the reference committee was unanimously adopted.

COMMITTEE TO STUDY HISTORY PUBLICATION

Dr. James G. Thompson: This committee is composed of Drs. Stanley A. Hill, David S. Pankratz, and James G. Thompson. This committee inquired as to how a history could be written without undue expense to the association; we did not find a way. One professional medical history writer was contacted but it was decided that we were not ready to go into a contract with him at this time due to a lack of enthusiasm for expenditure of funds and rewriting our present history or in writing a new history this year.

The chairman requests the incoming President to reappoint the present committee or another and to bear with us as tolerantly as possible until we can arrive at a satisfactory solution to this problem.

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Your reference committee received the report of the Committee to Study History Publication which was received too late for printing. This is substantially a progress report in which it is stated

that study should be continued and that the committee's tenure should be extended. We approve this report and recommend its adoption.

The report of the reference committee was unanimously adopted.

RESOLUTION NO. 1, IN MEMORIAM

Dr. W. E. Lotterhos: WHEREAS, There are absent from among our numbers 24 members who have been called by Divine Providence since the 91st Annual Session; and

WHEREAS, Although we are grieved upon the passing of these beloved colleagues and friends, we are inspired by their lives of service and professional attainment; and

WHEREAS, This expression of our grief, deep affection, and respect should be recorded permanently among official records of the Mississippi State Medical Association, now, therefore, be it

Resolved, That this House of Delegates does mourn the passing of the following esteemed colleagues:

George E. Adkins, Jackson, January 12, 1960
John B. Ainsworth, Raymond, January 14, 1960
James J. Carter, Biloxi, January 1, 1960
Robert N. Crockett, Sr., Woodville, July 26, 1959
Charles D. Davis, Plant City, Florida, February 23, 1960
Charles F. Dorsey, Brookhaven, February 27, 1960
Denver C. Funderburk, Olive Branch, February 19, 1960
George Y. Gillespie, Jr., Greenwood, December 4, 1959
John S. Hickman, Meridian, May 31, 1959
Dexter D. Johnson, Belmont, April 12, 1960
Hugh L. McCalip, Yazoo City, October 30, 1959
Little L. McCharen, West Point, February 7, 1960
Charles P. Mosby, Meridian, October 9, 1959
Van B. Philpot, Memphis, Tennessee, December 14, 1959
Hillary A. Portwood, Schlater, September 9, 1959
Woodie N. Reed, Amory, June 30, 1959
James O. Riley, Greenwood Springs, April 15, 1960
Grover C. Russell, Jackson, June 8, 1959
Joseph K. Seale, Jr., Greenville, April 30, 1960
James A. Slack, Friars Point, July 19, 1959
Wade H. Sutherland, Booneville, December 16, 1959
Hiram G. Williams, Prentiss, November 12, 1959
Plummer B. Williamson, Jackson, May 19, 1959
Raymond B. Zeller, Hazlehurst, June 4, 1959

ACTION OF THE HOUSE OF DELEGATES

Without objection, Resolution Number 1 was acted upon without referral and unanimously adopted by all members of the House of Delegates standing in silent tribute.

RESOLUTION NO. 2, SECTION ON GENERAL PRACTICE

Dr. W. E. Lotterhos: WHEREAS, A majority of members of the Mississippi State Medical Association are engaged in the general practice of medicine, and

WHEREAS, General practitioners, through scientific organization, have assumed voluntary responsibility for postgraduate education, making a separate section of the Scientific Assembly desirable and necessary, and

WHEREAS, Creation of this section would not only assist postgraduate education but would also stimulate attendance by general practitioners upon the Annual Session, now, therefore, be it

Resolved, That this House of Delegates does authorize and establish a Section on General Practice and that Section 1, Chapter IV, By-Laws of the association, be amended by adding at the end of the section, "(g) Section on General Practice."

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Your reference committee had the benefit of extended discussion in connection with Resolution No. 2 which seeks to create a new section in the association's scientific assembly.

We concur in the objectives sought and recommend that a Section on General Practice be organized. Your committee emphasizes that a majority of the members of the association are engaged in the general practice of medicine and the creation of this section will stimulate scientific work during our Annual Sessions.

The report of the reference committee was unanimously adopted.

REPORT OF THE COUNCIL ON CONSTITUTION AND BY-LAWS

Your Council on Constitution and By-Laws received by referral Resolution No. 2, Section on General Practice, introduced by Dr. William E. Lotterhos. The concern of your Council in this connection is with the constitutionality of the objective sought.

We concur that a Section on General Practice will be beneficial to the association and would stimulate the excellent scientific activity which is already being conducted.

The report of the reference committee was unanimously adopted.

RESOLUTION NO. 3, SECTION ON ANESTHESIOLOGY

Dr. Thomas J. Marland: WHEREAS, The specialty of anesthesiology is assuming a role of progressively greater importance in the practice of

medicine and the members of this discipline are increasing numerically, and

WHEREAS, The anesthesiologist, through professional education and postgraduate programs, is achieving greater competence and his usefulness as a consultant is of interest not only to those engaged in surgery but to all branches of medicine as well, and

WHEREAS, It is in the interest of total postgraduate training that this sound, constructive scientific progress be continued and that this specialized knowledge be made more widely available to all physicians, now, therefore, be it

Resolved, That this House of Delegates does authorize and establish a Section on Anesthesiology and that Section 1, Chapter IV, By-Laws of the association, be amended by adding at the end of the section, "(g) Section on Anesthesiology."

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Your reference committee had the benefit of extended discussion in connection with Resolution No. 3 which seeks to create a new section in the association's scientific assembly. Because of the fact that the representatives of the specialty of anesthesiology are numerically few in our state, we feel that existing specialty societies can adequately serve the scientific requirements of this discipline. Accordingly, we recommend that Resolution No. 3 be not adopted.

The report of the reference committee was adopted.

REPORT OF THE COUNCIL ON CONSTITUTION AND BY-LAWS

Your Council on Constitution and By-Laws received by referral Resolution No. 3, Section on Anesthesiology, introduced by Dr. Thomas J. Marland. The concern of your Council in this connection is with the constitutionality of the objective sought.

Because the members of the specialty of anesthesiology are numerically small in our state, we feel that existing specialty societies can continue to fulfill adequately the objective sought in Resolution No. 3 and we recommend that this resolution be not adopted.

The report of the reference committee was adopted.

RESOLUTION NO. 4, STERILIZATION

Dr. Frank L. Ramsay: WHEREAS, Physicians and hospitals are receiving an increasing number of requests for sterilization procedures for other than medically indicated reasons, and

WHEREAS, The medical profession in Mississippi is dedicated to providing those services which benefit patients and recognizes that there are many ramifications of this problem among which are legal, moral, and ethical considerations, and

WHEREAS, There is need for an official policy utterance in this connection by the Mississippi State Medical Association as well as suggested criteria for observation in all such cases, now, therefore, be it

Resolved, That the Council on Medical Service be requested to investigate and study this problem, suggesting a suitable policy position and appropriate guides for such criteria, if indicated, for use by the membership and professional hospital staffs of the state.

REPORT OF THE REFERENCE COMMITTEE ON MEDICAL PRACTICES

Your reference committee received for consideration Resolution No. 4, introduced by Dr. Frank L. Ramsay, subject: Criteria for Sterilization Procedures Requested by Patients. This resolution emphasizes that an increasing number of requests for sterilization procedures for other than medically indicated reasons are being received and that there are existing ramifications of this problem among which are legal, moral, and ethical considerations. Your reference committee concurs with the objectives expressed in this resolution and recommends that the Council on Medical Service investigate and study this matter, suggesting a suitable policy position and appropriate guides for such criteria, if indicated, for use by the membership and professional hospital staffs of the state. Such recommendations, of course, should be brought before the House of Delegates at the 93rd Annual Session in 1961.

The report of the reference committee was unanimously adopted.

RESOLUTION NO. 5, WORKMEN'S COMPENSATION

Dr. John G. Archer: WHEREAS, This House of Delegates has stated that the Mississippi Workmen's Compensation Act is inadequate as regards certain definitions, especially lacking those for "injury," "accident," "pre-existing condition," and "occupational disease," and

WHEREAS, There appears to exist a liberal construction of the act through which certain medical diseases have been adjudicated as having origins of accidental means, and

WHEREAS, The Mississippi Society of Internal Medicine has stated that such conditions should be regarded in a true scientific context of medical

disease and not as traumatic injury in the most commonly accepted sense, now, therefore, be it

Resolved, That this House of Delegates reaffirms its previously stated belief that the law must contain definitions of unmistakable clarity to the end of just and proper adjudication of all claims brought under the Workmen's Compensation Act.

REPORT OF THE REFERENCE COMMITTEE ON MEDICAL PRACTICES

Your reference committee received Resolution No. 5, introduced by Dr. John G. Archer, Subject: Medical Diseases Under Workmen's Compensation. This resolution points out that the Mississippi Workmen's Compensation Act is inadequate as regards certain definitions, especially with respect to those for "injury," "accident," "pre-existing conditions," and "occupational disease." Your committee approves this resolution but suggests that an alteration be made in the resolving clause and recommends that it read "RESOLVED, That this House of Delegates reaffirms its previously stated belief that the law should contain definitions of unmistakable clarity to the end of just and proper adjudication of all claims brought under the Workmen's Compensation Act.

The report of the reference committee was unanimously adopted.

RESOLUTION NO. 6, SECTION ON RADIOLOGY

Dr. A. Wayne Sullivan: WHEREAS, The Mississippi Radiological Society was organized and chartered in 1950 and has since met monthly in the interest of scientific and professional education, and

WHEREAS, This society is presently composed of approximately 25 members who practice the specialty of radiology and whose desire it is to make more widely available the useful scientific information, instruction, and services of this field of medicine which also includes the newer fields of nuclear medicine and medical radioactivity in general and is consequently becoming progressively more important, now, therefore, be it

Resolved, That this House of Delegates does authorize and establish a section on radiology and that Section 1, Chapter IV, By-Laws of the association, be amended by adding at the end of the section, "(g) Section on Radiology."

REPORT OF THE REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS

Your reference committee had the benefit of extended discussion in connection with Resolution No. 6, which seeks to create a new section in the association's scientific assembly. Because of the fact that the representatives of the specialty of radiology are numerically few in our state, we feel that existing specialty societies can adequately serve the scientific requirements of this discipline. Accordingly, we recommend that Resolution No. 6 be not adopted.

The report of the reference committee was adopted.

REPORT OF THE COUNCIL ON CONSTITUTION AND BY-LAWS

Your Council on Constitution and By-Laws received by referral Resolution No. 6, Section on Radiology, introduced by Dr. A. Wayne Sullivan. The concern of your Council in this connection is with the constitutionality of the objective sought.

Because the members of the specialty of radiology are numerically small in our state, we feel that existing specialty societies can continue to fulfill adequately the objective sought in Resolution No. 6 and we recommend that this resolution be not adopted.

The report of the reference committee was adopted.

ADDITIONAL ACTION OF THE HOUSE OF DELEGATES

There were no fraternal delegates from other states present. A report from Dr. J. T. Davis, Corinth, fraternal delegate to Tennessee, was received. The Speaker presented the following Auxiliary officers: Mrs. James T. Thompson, Immediate Past President; Mrs. Lee R. Reid, President; and Mrs. John G. Egger, President-elect.

The President and Dr. R. J. Moorhead presented a check for $100 to Miss Jane Brown, Gulfport, first prize in the High School Essay Contest sponsored by the Association of American Physicians and Surgeons on "The Advantages of Private Medical Care."

REPORT OF THE REFERENCE COMMITTEE ON RULES AND ORDER OF BUSINESS

Dr. Everett H. Crawford: Your Reference Committee on Rules and Order of Business commends the Speaker and Vice Speaker for the conduct of this House of Delegates and invites attention of all members of the association to the efficient manner in which business before this body has been transacted.

Your reference committee desires at this time to offer the following resolution for consideration by the House:

WHEREAS, The 92nd Annual Session of the Mississippi State Medical Association has been conducted at Jackson, Mississippi, during the period May 10-12, 1960, and

WHEREAS, The present Annual Session has been one of the largest, most profitable, and enjoyable meetings in the history of our association, now, therefore, be it

Resolved, That an expression of deep appreciation is made to our gracious hosts; to the efficient managements of the Hotel Heidelberg and King Edward and other cooperating hotels and motels; to the press, television, and radio; to the gracious ladies of the Auxiliary who always contribute substantially to our meetings; to the many able essayists for their informative and stimulating presentations, making our scientific work extremely profitable and enjoyable; to the Council on Scientific Assembly for the organization of this splendid program; to our tireless, energetic General Co-chairmen, Dr. W. E. Lotterhos and Dr. James G. Thompson, and their gracious counterpart in the Auxiliary, Mrs. Fred D. Hollowell; to the officers of the association and Woman's Auxiliary; to our technical and scientific exhibitors; and to all who shared the responsibilities of planning and conducting this great Annual Session.

The report of the reference committee was unanimously adopted.

OFFICIAL ATTENDANCE

Mr. Rowland B. Kennedy, Executive Secretary, announced official attendance 1,133 with 691 physicians, 234 Auxiliary members, and 208 others.

REPORT OF THE ELECTION OF OFFICERS

President-elect—Lawrence W. Long, Jackson

Vice Presidents—Frank M. Davis, Corinth; Jack V. King, Jackson; Charles R. Jenkins, Laurel

Delegate, AMA—John F. Lucas, Greenwood

Alternate Delegate, AMA—George E. Twente, Jackson

Editor—Thomas J. Marland, Jackson

Associate Editors—W. Moncure Dabney, Crystal Springs; J. Harvey Johnston, Jr., Jackson

Speaker, House of Delegates—B. B. O'Mara, Biloxi

Vice Speaker, House of Delegates—Howard A. Nelson, Greenwood

Board of Trustees—C. P. Crenshaw, Jr., Collins, District Seven; Everett H. Crawford, Tylertown, District Eight; C. D. Taylor, Jr., Pass Christian, District Nine

Council on Budget and Finance—W. K. Purks, Vicksburg

Council on Constitution and By-Laws—E. LeRoy Wilkins, Clarksdale

Judicial Council—Samuel B. Caruthers, Grenada, District Four; George H. Martin, Vicksburg, District Five; Omar Simmons, Newton, District Six

Council on Legislation—William E. Lotterhos, Jackson

Council on Medical Education—Temple Ainsworth, Jackson

Council on Medical Service—Frank M. Acree, Greenville, District One; Joseph B. Rogers, Oxford, District Two; M. Q. Ewing, Amory, District Three

Council on Socioeconomic Affairs—Mal S. Riddell, Winona, District Four; Carl D. Brannan, Jackson, District Five; C. B. Mitchell, Jr., Meridian, District Six

Blue Cross-Blue Shield Directors—William N. Crowson, Clarksdale; A. L. Gray, Jackson; Lamar Arrington, Meridian; Eugene A. Trudeau, Biloxi

Fraternal Delegates:

To Alabama—John W. Hunter, Meridian

To Arkansas—C. W. Patterson, Rosedale

To Louisiana—A. V. Beacham, Magnolia

To Tennessee—J. T. Davis, Corinth

There being no further business to come before the House of Delegates, the Speaker returned the gavel to the President, Dr. Hill. The Oath of Office was administered to Dr. G. Swink Hicks, the President-elect, by the Chairman of the Board of Trustees, Dr. H. H. McClanahan, after which Dr. Hicks addressed the House briefly.

Dr. James Grant Thompson then presented the Thompson Memorial Past President's Pin to Dr. Hill. Dr. Lawrence W. Long, the President-elect, was introduced and received an ovation from the House of Delegates.

The House of Delegates was adjourned *sine die* at 3:59 p.m., May 12, 1960. ★★★

MEDICAL CREDIT CARDS

The United States' first medical credit card has been introduced by the American Health Credit Plan, Inc., of Battle Creek, Michigan. The plan gives $500 in credit for a single person, $1,000 for married couples without children, and $1,500 for those with children. The card covers doctors' fees, dentists' bills, medicine, and hospital expenses.

Insider's Newsletter, June 6, 1960

COMMITTEES OF THE COUNCIL ON MEDICAL SERVICE

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M. Q. Ewing, Amory, Chairman
W. L. Jaquith, Whitfield
Thomas S. Eddleman, Jackson
Durward L. Blakey, Jackson
C. P. Crenshaw, Jr., Collins
L. T. Carl, Jackson

■ COMMITTEE ON DISEASES OF THE HEART

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J. Harvey Johnston, Jr., Jackson
Ira B. Bright, Greenwood
Thad D. Labecki, Jackson
Laurance J. Clark, Vicksburg
V. Carlton Temple, Hattiesburg
Ben F. Hand, Greenville

■ COMMITTEE TO STUDY RELATIVE VALUE SCHEDULES *(AD HOC)*

S. Lamar Bailey, Kosciusko, Chairman
Lamar Arrington, Meridian
G. Swink Hicks, Natchez
Joseph B. Rogers, Oxford
T. E. Ross, Hattiesburg

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B. F. Floyd, Gulfport

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JOURNAL OF THE
MISSISSIPPI STATE
MEDICAL ASSOCIATION

Volume I, Number 7

July 1960

Equity and Opportunity Through Keogh

I

WITHIN MINUTES, days, or weeks, the congressional conscience shall have overcome Treasury Department cussedness and Keogh-type legislation will be in the federal law books. Some of the glaring tax inequities against the self-employed will be corrected and the physician, attorney, architect, accountant, and engineer can thenceforth provide for their later years by means of a tax-deferred, voluntary conservation plan. And it's been a long time coming, too.

Since enactment of the Social Security law in 1935, the self-employed have been behind the financial eight ball. Corporate employees, for example, have enjoyed a quarter century of tax advantage in preparing for retirement. Whatever the corporation put up for pensions was tax-deductible for both the company and employee at the time of its conservation. When the individual retired, he paid only the going income tax on amounts drawn and under some special plans merely got lightly tapped for capital gains.

Not so with the self-employed who has been paying through the nose for every nickel he saves. When a physician conserves a dollar under present tax structure, it is literally the last dollar he has earned. Consequently, he pays the greatest amount for the privilege of setting aside this tax-diluted sweat of his brow. About eight years ago, Representatives Eugene Keogh (D., N. Y.) and the late Daniel Reed (R., N. Y.) assumed a role of leadership in correcting this inequity. The American Bar Association, American Medical Association, American Farm Bureau Federation, other national groups representing the self-employed, and the banking and insurance industries organized the American Thrift Assembly to promote and secure enactment of Keogh-type legislation.

II

The principle is simple: A self-employed individual would be permitted to conserve a limited amount of income derived from his principal endeavor on which no income tax would be paid at the time of the conservation. The savings would be placed in a specific, approved trust for use during retirement years when tax would be paid only on amounts drawn, thereby effecting a substantial savings.

The present version of the Keogh bill would allow a tax-deferred conservation of $2,500 annually or 10 per cent of adjusted gross income, whichever is the lesser, with a lifetime maximum conservation of $50,000 permitted. To adjust for older self-employed persons when the law becomes effective, the limit of annual savings would be increased by one-tenth for each full year in excess of age 50. Thus, a self-employed physician might deduct up to 20 per cent of self-employment income to a maximum of $5,000 annually.

III

The Mississippi State Medical Association has devised a plan for exclusive use by its members. The Deposit Guaranty Bank of Jackson, the largest such institution in Mississippi, is a partner and co-sponsor in the program; it will act as corporate trustee. There are three sound reasons why doctors ought to take a long, serious look at this, their own plan, before taking off on their own with an individual program.

First, despite success in business endeavor and an increasing understanding of economics and finance, most physicians are not expert in the investment field. Moreover, it is unlikely that other than a small minority has either the time or incentive to devote to such pursuits.

Secondly, the maximum lifetime conservation contemplated under Keogh-type legislation is such that disproportionately high acquisition and management costs will likely be incurred in individual programs. Without mass purchasing power and vigorous low cost management, growth potential is obviously restricted.

Finally, competition among trust, investment and insurance organizations for the self-employed's conservation dollar will be intense, tending to compound confusion and uncertainty among the uninitiated.

MSMA's Board of Trustees carefully examined every possibility under the law. As now proposed there are four: Mutual funds operating through a bank, insurance or annuity plans, approved trust programs, and combinations of these three.

IV

Mutual funds stress growth, although most such funds have not matched the better common stocks in appreciating during the past fifteen years. Acquisition or "loading" costs are high, often as much as eight per cent of purchase price and a management fee of one-half to one per cent is charged annually. Insurance is not purchased solely for investment purposes because its yield and growth are secondary to its chief function which is that of guaranteeing indemnification against a stated loss or adverse circumstance. Annuities are stable, low profit investment devices best suited to unusual tax situations.

What MSMA wants and is ready to provide for its members is a plan which first secures full benefit of tax deferment under the law, making the most of mass purchasing power. The Deposit Guaranty-MSMA Physicians Planned Income Program[1] will offer these unique advantages: no acquisition or entry costs, full protection from over-investment and an annual opportunity to catch up under-investment, the opportunity to recover dollar-for-dollar without commission cost or tax penalty any portion or all amounts invested on or before December 31 of the calendar investment year, and flexible options on benefits at age 65, among which are monthly, quarterly, semi-annual, or annual income—while the body of his trust continues to earn even more on a maximum security basis.

This uniquely advantageous program is called "Deferred Escrow Entry"[2] and it is the exclusive joint property of the bank and state medical association.

V

By the time this editorial appears in the pages of the JOURNAL, Keogh legislation may have become law. About one-fourth of the membership has indicated interest in the plan. The greater the participation, the greater the profit potential as administrative costs—already the lowest obtainable—decline even more. Isn't it about time to take a second look at this opportunity of a lifetime which is a lifetime of opportunity?—R. B. K.

Consider Our Friends

In the June issue of this JOURNAL a very timely editorial on insurance was published. To underline these remarks, this editor wishes to remind you that the insurance industry is probably the best friend medicine has outside our profession. Realistically of course, the insurance industry has much to gain by developing voluntary health insurance on a competitive basis that is free from all the undesirable elements associated with government-controlled medicine. But medicine too, has much to gain and our purpose is closely parallel with that of the insurance industry. Representatives from this field are making notable efforts in Washington to get the story across to our legislative bodies and have succeeded in forestalling definitive decisions designed to break down and demoralize the tradition of medicine that we are trying to preserve. So we must recognize this very large and influential force as a friend and treat it the same way we would treat any friend that is helping us in our cause.

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There is however, another area that involves insurance that unfortunately is common to medicine. That is the notion that these companies have an unlimited supply of funds and that economy never receives any consideration in the everyday management of their affairs. As physicians we must correct this illusion by informing our patients of the real basic nature of voluntary health insurance. We must also take a long hard look at our own attitudes and practices regarding the responsibility of insurance. This is one aspect of economics that is now a very important part of medical practice. We cannot ignore it. We cannot take it for granted, and we must realize that if the insurance industry loses ground because of financial abuses imposed on it by the recipients of its product, then our position in the arena of free medicine versus controlled medicine will be greatly weakened. These are friends. Let's help them and keep them as friends. We need them. —T. J. M.

A New Section

General practitioners throughout Mississippi may exhibit understandable pride in their new scientific section authorized by the House of Delegates during the recent 92nd Annual Session. Organization of this seventh formal body of the scientific assembly should encourage interest and participation by generalists in the association and its professional postgraduate work. Although few will misinterpret this primary purpose, it is emphatically stated that politics is not in the picture.

"I have a headache, backache, and heartburn. My husband doesn't give me much of his time and why didn't you take out the garbage this morning?"

Previously, general practitioners had no alternative but to register with sections devoted to one of the specialties during annual sessions. Because generalists comprise a majority of state association membership, it is only logical that their interests become a proper concern in the format and content of scientific activity. On the other side of the coin, the generalists themselves will accept responsibilities inherent in scientific recognition and carry their full share in the work of medical organization. There will be no withdrawal from the whole of the association nor clannish separation from other groups. Rather, this new section will become an important factor in further unification of MSMA's total scientific effort.

In this context of unity, the Section on General Practice will serve a stated scientific need but it will not be self-serving in the sense of selfish, vested interest. As at no previous time, medicine's community of interest is singular. Encroachments upon professional prerogative and sound patient care by advocates of federal schemes, welfare extension, and concepts foreign to traditional quality practice patterns are attempted with little distinction between generalist and specialist. Petty differences are minutia in the light of these broader, more serious considerations. When physicians combine their separate professional skills for the ultimate well-being of the patient, then specialty groups and general practitioners really have no quarrel.

General practice is here to stay. What the future holds and whether the internist will eventually become the general practitioner or not are academic. After all, the latter question is simply one of quantitative postgraduate training. Even today, the time required for medical education seems to affect adversely the caliber of applicants. It is, therefore, appropriate to hail this new scientific venture while charging it with the responsibility of upholding progress patterns so characteristic of MSMA's other scientific arms.—W. M. D.

'Mercy Missions': Hot News, Bad Medicine

I

The pattern is classic and although it occurs infrequently, once may be too often if life or health is adversely affected: The scene is a Mississippi Air National Guard base and the hour is late. There is an "emergency"—a gravely ill patient. A decision has been made to airlift him to a distant treatment center. The ground crew is busy

with a final preflight service check of the airplane and in the operations building, the air crew is taking a last look at the weather sequence clicking out on the teletype. An ambulance arrives to furnish the dramatic climax as it is escorted to the aircraft on the parking ramp. A litter is gingerly carried aboard and in moments, another "mercy mission" is airborne. Tomorrow's headlines are in the making.

II

For the greater part, transportation of the acutely ill in National Guard military aircraft is good news copy and bad medicine. Most tactical and administrative aircraft assigned to Guard units are unsuited for transporting sick people. Generally, there are no oxygen or pressurization systems with which to duplicate ground level air supply when the plane is at cruising altitudes. No physician need be reminded that in such instances hypoxia is a latent danger and calculated risk because in-flight altitudes are subject to weather whims and necessities of air traffic control.

When these aircraft are equipped with neither acoustical nor thermal insulation—and what C-47 is—their suitability for airlifting acutely ill persons is further diminished. It is also important to understand that, on occasion, air motion sickness may occur unexpectedly among even sophisticated air crews and passengers. Where the uninitiated are concerned, most medical authorities agree that there are psychological and emotional hazards in flying. All of these are serious considerations, especially when applied to the acutely ill.

III

The Mississippi National Guard is not only a competent military arm but a public spirited organization as well. After all, the Guard is an assembly of Mississippians who possess special qualifications for specialized tasks in the practice of the profession of arms. They are patriotic and dedicated to their state as well as the nation. Under certain authorities from Department of Defense level, the Guard may utilize equipment and personnel to save or prolong human life but its first business is preparation for combat readiness and the national defense.

As with any military agency, the National Guard must observe precisely stated regulatory policy as it seeks proper fulfillment of its mission. Since military men and machines may be diverted from defense to humane purposes only in emergencies, certain conditions must be known to exist before the diversion may be authorized. Logically, Guard officials require a written certification from a physician requesting a mercy mission flight in which it must be stated that air travel is the only recommended means of transportation, that non-military air ambulance service is unavailable, that required medical treatment is not available locally or within reasonable distance by surface travel, and that the flight is necessary to save or prolong human life.

These requirements are sane and sensible because of risks involved in airlifting the acutely ill. Except for rare and unusual circumstances, care is available locally or within short distances in Mississippi. These are considerations in the interest of the patient which properly are a first concern.

But there are additional considerations relating to the public interest and the practice of medicine. Operation of military aircraft is not only expensive but these complex machines are not designed or intended for this patently non-military application. Additionally, if care is available in the state—and it usually is—then a false impression shall have been created with respect to professional attainment among Mississippi physicians. However objective the headline reporting the mercy mission, there is no remedy for the unspoken declaration that there simply wasn't a doctor in the state equal to the medical Goliath at the distant treatment center.

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"That lady who ran over you is anxious for you to get well. . . . She wants you to see what you did to her fender."

IV

The Mississippi National Guard frankly states that it does not wish to question the certification of a physician recommending a mercy mission. Its top air officers, however, sometimes entertain grave misgivings as to the validity of some certified emergencies. The Mississippi State Medical Association's House of Delegates recently agreed with these leaders and offered them a recourse. It's simply this: As at surgery, the opinion of a physician asking for airlift service should be subject to review by his colleagues in the local professional community by appropriate and knowledgeable representatives of the component medical society. And the delegates said this with a unanimous voice.

For a vast majority of Mississippi physicians, mercy missions will never be a problem. They will provide quality medical care on the spot, meeting emergencies with no help from doctors hundreds of miles away. But for the few who may feel or act otherwise, these facts and a reminder of association policy are stated. The issues are unmistakably clear: the well-being of the patient, proper utilization of military organization, and the public confidence in local medical care. And MSMA stands for all three.—R. B. K.

A Dose of Trouble

Mail order prescription schemes are becoming a headache to medicine and pharmacy but dangers inherent in drugs-by-mail are such as to command the attention of every ethical physician and pharmacist. The Mississippi State Pharmaceutical Association and the State Board of Pharmacy have expressed deep concern over this practice—not from a standpoint of economics but in the interest of preserving quality standards of dispensing and wholesome professional practices. And with good reason, too, when the facts are examined.

The patient who walks out of the doctor's office to the mail box with his prescription must inevitably experience a delay in obtaining his medication, perhaps too late to do the therapeutic job for which it is intended. And the patient may try to bridge the mail delivery gap with harmful self-medication.

The District of Columbia lunatic fringe isn't confined to liberal politicians and people pressuring the Congress to make them equal to something. The marble city along the polluted Potomac also harbors a host of mail order drug supply operators because the practice of pharmacy in the District of Columbia is based on an antiquated, inadequate 1906 act of Congress. The Federal Trade Commission is investigating some such operations and has already discovered mail order drug premises consisting ". . . of nothing more than an empty room without any inventory, fixtures, or pharmaceutical equipment." Some are unbelieveably filthy.

The gimmick for the drugs-by-mail schemers is economy pricing. But apart from delays in supply, substandard facilities, and limited service, there are other highly undesirable and dangerous aspects in the picture. Since filling prescriptions over state lines may constitute a violation of medical practice acts, no mail operator will supply narcotics. Similarly, they dispense no prescriptions requiring compounding and with assembly line organization and methodology, the chance of dispensing error is notably increased. Across state lines, the patient is denied the protection he has a right to expect from his own state laws governing the practice of pharmacy.

The American Pharmaceutical Association is supporting H.R. 10597, a bill to update the archaic District of Columbia pharmacy act. Spokesmen for the American Medical Association have condemned drugs-by-mail as bad medicine. A patient should be free to choose his pharmacist as he is to select his physician but appropriate protection against a dose of trouble under a postage stamp is needed.—R. B. K.

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"I'm just calling to tell you that you don't have what we thought you had, Mrs. Brown. . . . You have something lots worse."

MEETINGS

NATIONAL AND REGIONAL

American Medical Association, November 28-December 1, 1960, Washington, D. C. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago 10, Ill.

American College of Surgeons, October 10-14, 1960, San Francisco. William E. Adams, Secretary, 40 E. Erie St., Chicago 11, Ill.

American Academy of General Practice, April 13-20, 1961, Miami Beach, Florida. Mr. Mac F. Cahal, Executive Director, Volker at Brookside, Kansas City 12, Mo.

Southern Medical Association, October 31-November 3, 1960, St. Louis. Mr. Robert F. Butts, Executive Secretary, 2601 Highland Ave., Birmingham 5, Ala.

Gulf Coast Clinical Society, October 12-13, 1960, Biloxi, Mississippi. George W. Rogers, Secretary, P. O. Box 37, Handsboro, Miss.

STATE AND LOCAL

Mississippi State Medical Association, May 9-11, 1961, Biloxi. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson, Miss.

Mississippi Academy of General Practice, September 28-29, 1960, Jackson. Miss Louise Lacey, Executive Secretary, Walthall Hotel, Jackson, Miss.

Amite-Wilkinson Counties Medical Society, First Tuesday March, June, September, December. S. E. Field, Centreville, Miss., Secretary.

Central Medical Society, First Tuesday Monthly, 6:30 p.m., Robert E. Lee Hotel, Jackson, Miss. C. G. Sutherland, 918 N. State St., Jackson, Miss., Secretary.

Claiborne County Medical Society. D. M. Segrest, Port Gibson, Miss., Secretary.

Clarksdale and Six Counties Medical Society, Fourth Wednesday March and September, 2:00 p.m., Clarksdale, Miss. Robert R. McGee, 150 Yazoo St., Clarksdale, Miss., Secretary.

Coast Counties Medical Society, First Wednesday March, June, September, and November. Charles N. Floyd, 1412-23rd Ave., Gulfport, Miss., Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Miss., Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando, Miss. L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Miss., Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Monthly, 7:30 p.m., Natchez Country Club, Natchez, Miss. W. T. Colbert, 539 Park Place, Natchez, Miss., Secretary.

North Central District Medical Society, Second Wednesday March and September. W. A. Middleton, 214 Summit St., Winona, Miss., Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December, Tupelo, Miss. Eugene M. Murphey, III, 421 Main St., Tupelo, Miss., Secretary.

North Mississippi Medical Society, First Thursday January, April, and October, Oxford, Miss. R. L. Wyatt, Holly Springs, Miss., Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. George B. Stewart, 215 Kirkwood St., Picayune, Miss., Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. Thomas F. Puckett, 715 Arledge St., Hattiesburg, Miss., Secretary.

Tri-County Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Miss., Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg, Miss. Thomas H. Mitchell, The Street Clinic, Vicksburg, Miss., Secretary.

Book Review

Ensuring Medical Care for the Aged. By Mortimer Spiegelman. 270 pages. Philadelphia: The Pension Research Council—Richard D. Irwin, 1960. $5.75.

This study brings together all of the meaningful data on the problem of providing medical care for older people and presents a wealth of information on such factors as economic and health status of the aged and the extent of their medical care expenditures.

Spiegelman, associate statistician, Metropolitan Life Insurance Company, is a Fellow of the Society of Actuaries and of the American Public Health Association. He is one of the nation's most eminent and highly respected authorities on population and medical statistics.

"Ensuring Medical Care for the Aged" stresses that any mechanism for helping older people to finance medical costs must have sufficient flexibility in order to adapt to rapid changes in the characteristics of the population and in medical science, practice and facilities.

"Voluntary insurance promises ready adjustments as a consequence of community and competitive pressures," Spiegelman asserts, adding:

"A compulsory insurance program geared to conditions current at its start, depends upon legislation and political expediency for its adjustments."

The Spiegelman volume is the latest publication of the Pension Research Council, an agency of the Wharton School of Finance and Commerce of the University of Pennsylvania. The council was created in 1952 for the purpose of conducting objective and unbiased research in the area of private pensions.

Spiegelman carefully explores the current situation and the outlook in the supply of medical care, emphasizing that the shortage of facilities and personnel is a problem requiring priority solution.

"Notwithstanding intensive efforts to build needed medical facilities throughout the country, appreciable gaps are still evident," he reports after presenting data on supply and demand.

He comments, "Current shortages of health personnel, the limited potential for their increase, and the requisities for additional facilities have an important bearing on the development of programs to insure the costs of medical care.

"In the face of such gaps, an immediately introduced large-scale insurance program under government sponsorship, such as one for the aged, may produce appreciable dislocations in medical care services . . ."

In a brief concluding section, Mr. Spiegelman points to the need for individuals, labor unions and communities to "maintain a broad perspective with regard to medical care in old age."

He states, "The individual, planning for his later years, weighs the possibilities for current consumption against the likely needs of the future.

"In our economy, the means of providing for the later years can take many forms, such as home ownership, pensions, savings bank deposits, and the purchase of life insurance and health insurance.

"The employer, acting alone or with the labor union through collective bargaining, will consider how much of the resources available for fringe benefits can be devoted to financing a medical care program for retired workers."

Similarly, the community "must give careful consideration to the medical care needs of old age in allocating available resources," Spiegelman states.

Proposals for providing health coverage to beneficiaries of Social Security, he says, have actually raised two basic policy questions: (1) Whether the existing system of voluntary health insurance can do the job of covering older people, and (2) What implications of a national health scheme would be involved.

"So far as the first issue is concerned," he declares, "voluntary health insurance for the aged is now in its developmental stage. Given the same opportunity to develop programs for the aged as it has for the working population, the voluntary insurers express confidence in their ability to meet the problem; this confidence is shared by the leading professions in the actual provision of medical care, but not by proponents for an insurance program within OASDI (Social Security)."

On the second question, Mr. Spiegelman states: "Public policy will be formulated not only by taking into account current problems and their outlook, but also the cultural patterns and traditions of our society."

Public Affairs Pamphlet

The Arthritis Hoax, $250,000,000 in Frauds and Fallacies. Public Affairs Pamphlet No. 297 (May) 1960.

The nation's 11 million arthritics spend more than $250 million each year for misrepresented drugs, devices, and treatments. This estimate is based on an extensive study by the Arthritis and Rheumatism Foundation reported in this new Public Affairs pamphlet.

The survey, the first to be made of arthritis quackery, involved extensive research of records of the Federal Food and Drug Administration, Federal Trade Commission, and Postoffice Department, and personal interviews with officials of these agencies. Additional information was obtained from numerous sources, including the American Medical Association, and legal, drug trade, and advertising information sources, as well as from more than 1,000 arthritics.

Data from the study showed that 57 per cent of the arthritics using proprietary products buy at least one that is misrepresented. "Because no specific cure is available," the pamphlet concludes, "The arthritic's often agonizing aches and pains drive him to try anything which promises relief."

The book points out that many of the products which promise relief have as their only pain-reducing ingredient plain ordinary aspirin which can be bought a lot cheaper.

Uranitoriums, says the pamphlet, have sprung up all over the country to lure many arthritis victims. It points out that in one year, 250,000 persons from the East Coast alone journeyed to Texas to take uranium mine treatments. In 18 months, more than 100,000 persons patronized a mine in the mountain states, it says.

According to the pamphlet, the amount of radiation to be secured from sitting in these mines is about equal to that from an illuminated watch dial. This is fortunate, it declares, for otherwise the patients would suffer radiation burns.

Other fallacies and fancies turned up by the survey lay in the field of diet and food supplements. Contrary to many claims, states the pamphlet, "no special diet or food supplement can either cause or cure the ailment. A well-balanced diet is important for the arthritic—as it is to everyone."

To avoid being taken in by quacks, the Arthritis and Rheumatism Foundation warns:

1. Beware of any drug or device which claims to provide more than "temporary relief for the minor symptoms of arthritis."
2. Be aware that even in many products advertising "temporary relief," this relief is usually provided by aspirin or an aspirin-like ingredient (salicylate). These can be purchased as such at a fraction of the cost of the glamorized product.
3. Check any product, before you buy it, with your family doctor, your county medical society, or the local chapter of the Arthritis and Rheumatism Foundation.
4. Remember that just because a remedy has not been driven off the market by legal action does not mean its claims are justified. Many promoters hold off the government for years in long court battles while they reap profits on a worthless product.
5. Avoid "arthritis cures" advertised on radio, television and in the newspapers. Remember, a real cure for arthritis has not yet been found.
6. Discount testimonials.

("The Arthritis Hoax" may be secured from the Public Affairs Committee, 22 East 38th Street, New York City, for $.25.)

NEW FILMS

Medicine and the Law. Series of six films. 16 mm., black and white, sound, showing time 30 minutes each. Produced by the William S. Merrell Company in cooperation with the American Medical Association and the American Bar Association. Available from the Film Library, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois, for return postage and small sum for insurance costs. For medical and hospital groups.

The initial film of the series, "The Medical Witness," shows the physician the right and wrong ways of giving medical testimony, using the dramatic trial of a personal injury case as an example. The information in the film is of particular value to physicians in an era when 60 per cent to 85 per cent of all litigation requires a medical report or medical testimony. "The Medical Witness" was named one of the best 16 mm. educational films of 1956.

The second film in the series, "The Doctor Defendant," deals with circumstances leading to professional liability actions, dramatizing four specific legal actions against physicians. In addition to pointing out ways to prevent the causes of such suits, the film shows how a professional liability

committee of a local medical society can deal with these problems.

"The Man Who Didn't Walk," the third film, takes up the problem of alleged traumatic neurosis. A man whose leg is fractured in an accident claims inability to walk, despite medical evidence that the fracture is healed. The film acquaints doctors and lawyers with each other's professional, procedural, and ethical problems. It also points up difficulties in establishing the bona fide existence of such an illness, and shows medical examination and courtroom procedures.

"A Matter of Fact" illustrates the importance of post mortem examinations by qualified pathologists. On the basis of circumstantial evidence and a coroner's investigation a man faces a murder charge in the death of his wife. He is found to be innocent through the autopsy findings of a qualified medical examiner.

Latest addition to the series, "No Margin for Error," dramatizes the human mistakes that can happen within a modern hospital which sometimes result in legal action. Using cases of improper patient identification, wrong blood typing, medication errors, and inaccurate sponge counts as examples, the film alerts physicians and hospital personnel to the need for constant vigilance to prevent mistakes. This film was produced with the cooperation of the American Hospital Association and AMA.

"A Film on Chemical Tests for Intoxication" is to be released this summer. The film deals with the subject of chemical tests for intoxication and the introduction of the results of such tests in court.

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"A pound of cure, please."

I Am a Doctor. 16 mm., color, sound, showing time 25 minutes. Produced by the American Medical Association and the Association of American Medical Colleges. Free loan on request (return shipping charges only). Order from American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois. Especially recommended for guidance programs, career days, school assemblies, and health fairs.

I Am a Doctor is a survey of the careers open in medicine in general practice, specialization, research, teaching, and administration. The story concerns a young physician who, shortly before his death from leukemia, reflects on the satisfactions and sacrifices which medicine has brought to his life. He reviews the long years of college and medical study, the miracles in surgical amphitheatres, the challenges and frustrations of laboratory research. Finally, he projects his thought into the future, envisioning the promise of tomorrow—space medicine, applying the atom to medical advances, and the new break-throughs in the conquest of disease.

Rehabilitation Adds Life to Years. 16 mm., color, sound, showing time 30 minutes. Produced by the Committee on Rehabilitation, American Medical Association. Available (for return postage only) from American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois. Designed primarily for use with medical societies and hospital staffs.

More than 28 million Americans have some mental or physical disability. How well they conquer their problems depends to a great extent on the services available in their community. This film points out the role of the physician in initiating and directing community rehabilitation programs. Case histories are given to illustrate the various types of rehabilitation problems—the hemoplegic housewife . . . the factory worker with an injured hand . . . the coronary victim. Possible community services—such as convalescent homes, employment groups, visiting nurses, social agencies, protective workshops, speech clinics, vocational guidance groups, and hobby groups—are discussed. The thesis of the film is summed up by the fictional Dr. Miller who says: "Rehabilitation programs without medical guidance serve little purpose . . . but with it, the physician, who for so long has been adding years to life can now add life to those years."

PERSONALS

C. V. Akin, Shubuta, retiring director of the Clarke-Wayne Health Department, was recently honored by the staff of the department with a dinner. Members of the staff presented Dr. Akin with a Bible.

H. F. Boswell, Jr., DeKalb, has accepted appointment to a three years residency in ophthalmology at the Victor C. Smith Memorial Eye Clinic, New Orleans. The clinic only accepts one resident a year. Prentiss Keys, Hickory Flat, will assume Dr. Boswell's practice.

David Owen Cole, Jackson, will join Eric Robbins and Jim Barnett on the staff of the Brookhaven Medical Clinic. He will succeed the late Charles Dorsey. Dr. Cole received his training at the University of Mississippi School of Medicine and recently completed his internship at the Baptist Hospital.

Marion P. Parker, Rolling Fork, has entered a residency in anesthesiology at the University of Mississippi School of Medicine.

Charles Stern, Natchez, has been elected a Diplomate of the American Board of Ophthalmology. Dr. Stern took his residency in ophthalmology at the Louisiana Charity and Veteran Administration Hospitals in New Orleans under the auspices of the Tulane University Post Graduate School of Medicine.

Newsletter Report Pans Canned Tan

Canned tan may prove to be a bad fad warns the June 6 *Insider's Newsletter*. If you're thinking about getting your tan out of a bottle, says the *Newsletter,* remember:

1. No one, manufacturers nor research firms, knows exactly how dihydroxyacetone—the chemical agent that causes the color change—darkens the skin. One leading New York skin specialist commented, "Anyone who uses such tanning products is allowing himself to be a guinea pig."

2. The U. S. Food and Drug Administration, in a recent statement on tanning products, points out that they have no reason at present to believe that application of tanners will injure skin, but adds: "We do not know just how dihydroxyacetone reacts with the skin." Although artificial tanning agents containing dihydroxyacetone don't come under the New Drug Act, the FDA is currently conducting toxicity tests on such products and will issue a report late this summer.

3. A Post Office Department investigation of the pioneer product Man Tan caused the makers, the Drug Research Corporation, to retract certain mail-order ad claims. Seems Man Tan does not tan "like the sun" or provide Vitamin D "like the sun."

Consumer complaints include "mottled and spotty appearance" when the bottled "tans" started to wear off, dark-stained fingertips, streaks and poor color ranging from yellow to orange. (FDA recommends soap and water as the best antidote for spots and stains.)

Conclusion: Best idea is to try any man-made tanner on a small patch of skin for a few days before donning a whole coat of tan from any tube, bottle or jar.

Soft Water: One Cause of Heart Disease?

Heart disease rates vary widely in different parts of the country, but to date no one has been able to explain why.

Now, Dr. Henry A. Schroeder, Brattleboro, Vt., has come up with a unique theory. Dr. Schroeder, according to the April 25 *Insider's Newsletter,* conducted a national study and discovered that the kind of water—soft or hard—drunk in any area has a numerical relationship to deaths from heart and circulatory ailments.

Dr. Schroeder's study showed:

(1) Twenty-three states and the District of Columbia have softer-than-average water. Of these, 15 states had higher-than-average death rates from cardiovascular diseases.

(2) Only five of the 25 states with harder-than-average water had a higher-than-average death rates from such diseases.

(3) Highest cardiovascular death rate during the years analyzed (1949-1951) was 511.4 per 100,000 people—the record of South Carolina, which ranks second only to Oregon in the softness of its water.

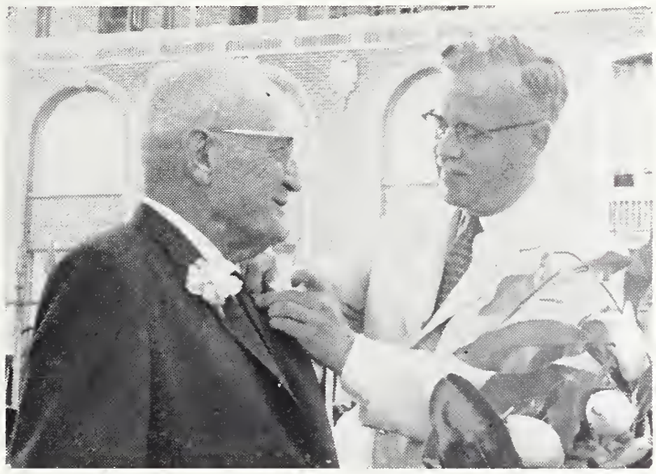
(4) Lowest death rate—290.2—was in New Mexico, whose water is third hardest (after South Dakota and Nebraska).

(5) The trends were the same in 163 cities studied, as well as the states.

Dr. Schroeder, who teaches at Dartmouth Medical School, plans a number of new studies.

Rankin County, MSMA Honor Beloved Physician

Rankin countians turned out hundreds strong June 1 to honor a distinguished medical citizen, Dr. W. H. Watson, on the golden anniversary of his professional career. Civic, religious, business, and professional leaders from Brandon and other cities were on hand for the public ceremonies. Dr. Lawrence W. Long, Jackson, MSMA president-elect formally inducted Dr. Watson into the Fifty Year Club.



Highlight of the special ceremony honoring Dr. W. H. Watson was his election to MSMA's 50 Year Club. Dr. Lawrence W. Long, right, pins coveted half century insignia on Dr. Watson.

Presiding over the testimonial program was State Senator John McLaurin who introduced speakers. Representatives of the Jackson press estimated the audience at 600 persons who overflowed seating in the courthouse and town squares. Telegrams of congratulations and appreciation from Governor Ross R. Barnett, Senator John C. Stennis, Congressman Arthur Winstead, and a host of others were read. Principal speakers were Mrs. W. G. Barnes and Judge W. E. McIntyre who recalled Dr. Watson's career of professional and community service. Dr. William E. Lotterhos, Jackson, spoke in behalf of the Mississippi Chapter, American Academy of General Practice, of which the honoree is a charter member.

A former member of the state board of health and co-founder of the Mississippi State Sanatorium near Magee, Dr. Watson was graduated from the Tulane University School of Medicine in the class of 1910. His entire practice career has been spent in Rankin county in Brandon, Florence, and the Rankin community.

Dr. Watson was elected a member of the Mississippi State Medical and American Medical Associations in 1911 and has maintained continuous good standing since. He is an emeritus member of MSMA and became a member of the Fifty Year Club June 1.

Present for the ceremonies were members of Dr. Watson's family including children, grandchildren, and his two brothers, a minister and a pharmacist. Fellow townsmen showered gifts upon the beloved physician and the Rankin county chamber of commerce and Lions Clubs presented engrossed resolutions of commendation and appreciation.

Dr. Austin Celebrates Golden Anniversary

Patients, friends, relatives, and now-grown babies delivered by Dr. R. B. Austin, Forest, gathered May 12 to celebrate the 74-year-old physician's 50th anniversary in medical practice.

Dr. Omar Simmons, Newton (left), presents a Fifty Year Club pin to Dr. R. B. Austin, Forest (right), at reception honoring Dr. Austin's 50th anniversary of medical practice. (Photograph courtesy of Scott County Times.)

Events of R. B. Austin Day, as proclaimed by Forest Mayor J. E. Calhoun, included a luncheon and a reception at Lackey Memorial Hospital.

Dr. Omar Simmons, Newton, representing MSMA, presented a Fifty Year Club pin to Dr. Austin. Said Simmons, "Dr. Austin is to be praised for his splendid record of service as a doctor and citizen."

Dr. David Lee, who was delivered by Dr. Austin 30 years ago and is now president of Lackey Hospital medical and dental staff, gave Dr. Austin a fishing rod, reel, and tackle box on behalf of the staff.

Said Austin after it was all over, "It is difficult to find words to express my deep appreciation to everyone who prepared for and participated in the reception for me on the occasion of my Golden Anniversary in the practice of medicine. It was wonderful to see again my friends who attended the reception."

Moorhead, Mitchell To Head New GP Section

Officers of the seventh formal section of the association's scientific assembly were recently appointed by Dr. G. Swink Hicks, Natchez, MSMA president. Named to head the newly-created Section on General Practice is Dr. R. J. Moorhead, Yazoo City, who will serve as the first chairman during the 1960-61 association year.

Dr. Tom H. Mitchell, Vicksburg, was named section secretary. Both appointees are active in scientific circles of medical organization. Moorhead is currently president of the Mississippi Chapter, American Academy of General Practice, and Mitchell is president-elect. Each is active in state medical association committee work.

The new section was authorized by the House of Delegates at the 92nd Annual Session, May 10-12, 1960, at Jackson, when favorable action was accorded a resolution introduced by Dr. William E. Lotterhos calling for the new scientific arm. Since the section has not yet been organized, it was necessary for the president to appoint officers. At and after the 1961 annual session, section members will name officers by ballot.

Other sections of the scientific assembly are surgery, medicine, pediatrics, EENT, preventive medicine, and obstetrics and gynecology. Association officials estimate that the Section on General Practice will be one of the larger such units.

Section scheduling and formal programs are organized annually by the Council on Scientific Assembly. The group is headed by Dr. Lotterhos who is chairman *ex officio* through his elected post as secretary-treasurer. Council members are chairmen of the seven scientific sections. For 1960-61 these are Drs. J. T. Davis, Corinth, surgery; Eugene M. Murphey, III, Tupelo, medicine; W. Q. Cole, Jackson, pediatrics; R. H. McArthur, Jackson, EENT; A. N. Morphy, Gulfport, preventive medicine; Carl E. Lewis, Jackson, obstetrics and gynecology; and R. J. Moorhead, Yazoo City, general practice.

Vicksburg Hospital Staff Honors Dr. Knox

Dr. I. C. Knox, Sr., co-founder of the Vicksburg Hospital, observed his Golden Anniversary in the medical profession May 24.

Employees and fellow staff members of the hospital gave him a portable radio and album of pictures of the donors, and an inscribed plaque citing his fifty years of service at a party at the hospital.

Said Dr. W. K. Purks in presenting the plaque, "You have made it in grand style and in the best tradition of the medical profession. With kindness and understanding, you have given an amazing service to this community. No physician, I am sure, has seen and treated more patients."

Dr. Knox began his practice May 24, 1910, in his hometown of Pontotoc. In 1928 he with Dr. W. H. Parsons organized and built the Vicksburg Hospital and served as its president for 29 years. He is presently serving as head of the section of general practice.

Artz to Coordinate Burn Conference

Dr. Curtis P. Artz, Jackson, is serving as coordinator of the first International Congress on Research in Burns to be held September 19 through 22 at the National Naval Center in Washington.

Dr. Artz is a member of the department of surgery, University of Mississippi School of Medicine and an active researcher in the field of burns.

More than 100 scientists currently engaged in burn research will attend the Congress, which is being held under the auspices of the American Institute of Biological Sciences. Countries to be represented include Canada, Mexico, Chile, Peru, Scotland, England, Sweden, Yugoslavia, China, Italy, and the U. S. S. R.

During the meeting, some 55 ten minute papers are scheduled to be delivered. A volume on burn

research to contain about 35 of the papers is planned. The entire burn field will be covered; the book will be directed particularly to surgeons.

Dr. Frank Berry, assistant secretary of defense (health and medical), is honorary chairman of the Congress. The last conference on burns was conducted in October 1955.

Lewis Gets Post With Drug Maker

Dr. Earl T. Lewis, a former Mississippi practitioner, has been named associate director of clinical research at Mead Johnson and Company, Evansville, Indiana.

During the past four years, Dr. Lewis has conducted private practice in Mendenhall and Magee and served as resident physician in internal medicine at the University of Mississippi Teaching Hospital.

In his new post with the Evansville pharmaceutical and nutritional products firm, Dr. Lewis will aid in the clinical testing of new products.

A native of Hattiesburg, Dr. Lewis took his premedical training at Millsaps College. He received his medical degree from Jefferson Medical College, Philadelphia, and interned at Baptist Memorial Hospital, Memphis.

Medical Payments Up in Aid Programs

Medical payments for the needy under the four Federal-State public assistance programs have more than doubled in a five-year period, the Health Insurance Institute said.

The four joint programs—Old Age Assistance (OAA), Aid to Dependent Children (ADC), Aid to the Blind (AB), and Aid to the Permanently and Totally Disabled (APTD)—accounted for $265 million in medical payments in 1958, an increase of 151 per cent over the $106 million paid out through these programs in 1953, the Institute said. The increase over 1957, when $224 million was paid, was 18 per cent.

PAYMENTS MOUNT

Over the five-year period medical payments climbed under each of the programs, and the greatest increase, 287 per cent, was shown by the ADC program. The 1958 expenditures for medical care for each program were $177 million for OAA, $51 million for ADC, nearly $6 million for AB, and $31 million for APTD for a grand total of $265 million.

These various assistance programs also provide funds for the food, clothing and housing needs of the recipients. In 1958, more than 2.4 million elderly persons received OAA, some 2.8 million youngsters were helped by ADC, about 110,000 persons received AB benefits and 328,000 were covered by the APTD program.

TOTAL PAYMENTS

The total payments under all four programs in fiscal year 1958 came to $2.9 billion, of which the Federal Government contributed about 60 per cent.

The proportion of elderly persons receiving OAA has declined. The Institute stated that in 1949, more than 22 per cent of all persons aged 65 or over received OAA, but that by 1958, the figured had dropped to less than 16 per cent.

In a state-by-state breakdown in 1958, Louisiana had the highest figure with more than 57 per cent of its elderly receiving OAA, while New Jersey was the lowest with less than four per cent of its aged on the OAA rolls.

In 1958, some 34 out of every 1,000 children in the U. S. received aid under ADC. The state with the highest figure was West Virginia where 81 of every 1,000 youngsters were covered by ADC. New Jersey again was the lowest with 13 out of every 1,000 on ADC.

Sees Health Costs Cut Through Nursing

A prominent insurance spokesman suggested that a reduction in medical care costs might be achieved through the development of planned programs of visiting nurse services.

"This expanded role by public health nursing, provided as part of organized home care programs or otherwise, would require the active cooperation and coordination of physicians, hospital staffs, nursing agencies, insuring organizations, and the public," said Joseph F. Follmann, Jr., Director of Information and Research of the Health Insurance Association of America.

Stating that insurance coverage for public health nursing was gradually growing, Mr. Follmann said the importance of considering part-time nursing care in the home was not so much insuring a form of care which in itself often is not costly, but rather of making broadly available and encouraging the use of this form of care.

"If coverages are limited to care in the hospital, it would seem self-apparent that hospital stays will

be longer and perhaps more frequent than need otherwise be so, medically," said the spokesman for the HIAA, an organization of 270 insurance companies.

He said it was incumbent upon those concerned with medical care and its financing to seek means to reduce costs wherever possible, and that "many experiments were under way in this direction, including progressive hospital care, out-patient, organized home care programs, and the use of public health nurses and homemakers services."

PROBLEM AREAS

The problems to be overcome, he said, are a decline in the number of visiting nurses and the attitude that public health nursing is a service for the indigent or the very low income groups.

"Many people do not realize that, generally, this service as provided by voluntary agencies is available to everyone regardless of economic status, and it can be paid for on a per-visit basis, with the charge usually ranging from $1 to $5," stated Mr. Follmann.

Turning to the problem of the number of public health nurses, Mr. Follmann said that of the more than 28,000 such nurses in the U. S., about one-half are employed by counties and cities, one third by boards of education, and the remaining 15 per cent by voluntary visiting nurse associations. Twenty years ago, said Mr. Follmann, voluntary agencies employed 33 per cent of public health nurses.

He said voluntary agencies devote 90 per cent of their nursing time to home visits compared to less than 45 per cent for county and city health departments. In addition, declared Mr. Follmann, the number of graduate nurses employed by the 1,038 voluntary agencies declined by 650 in the 1951-57 period to a total of 4,122.

New SMEB Secretary Named, Program Trimmed

A Jackson daughter succeeded her mother in a key medical administrative post, according to an announcement of the State Medical Education Board. Mrs. Lucille M. Hardy has been named acting secretary of the rural scholarship awards body, replacing Mrs. Julia C. Davis who retired May 31 after 28 years of public service. The board will presumably elect Mrs. Hardy executive secretary during a summer session.

A five-member body administers the state rural medical scholarship law which soon enters its thirteenth year since becoming effective in 1948. Three members are prescribed by law and the governor appoints two from the public at large. The former include the dean of the University of Mississippi School of Medicine, the executive officer of the state board of health, and the president of the Mississippi State Medical Association.

New terms will be coming up for Dr. David S. Pankratz, medical school dean, and Dr. A. L. Gray, chief executive of the board of health. Dr. G. Swink Hicks, Natchez, will serve during his tenure as MSMA president. Governor Barnett named Representative Clarence Pierce of Carroll county to membership, leaving one unfilled post.

The 1960 regular session of the Legislature tightened up on the scholarship program, following a pattern of reduction advocated by the state medical association. Appropriations included $93,000 of which $63,000 was earmarked for scholarships of students now in medical school. Of the remainder, $25,000 is for administration and $5,000 was tagged for two new Negro scholarships. Under the program, a student may receive as much as $5,000 for assistance during four years training, a maximum of $1,250 per year. During early years of the program, biennial appropriations have been as much as $525,000.

A last minute enactment of the recent legislative session would permit establishment of a $20,000 revolving loan fund which would be repaid in cash rather than by rural service as was first authorized in the law. The latter provision was abolished in the new authorization.

University Confers 87 Degrees

The University of Mississippi School of Medicine conferred 87 degrees in the health sciences during commencement exercises June 5.

Chancellor J. D. Williams awarded 63 doctor of medicine, three doctor of philosophy, one master of science, and 20 bachelor of science in nursing degrees to candidates in the School of Medicine, Graduate School, and School of Nursing.

The doctor of philosophy degrees were the first to be awarded by the University School of Medicine. Recipients were Glenn Gentry, Nashville, Tenn.; Jimmie Langston, Greenville, and Antonio Sekul, Chile.

Rear Admiral B. W. Hogan, surgeon general of the United States Navy, delivered the commencement address.

Medicolegal Institute Set Up at GWU

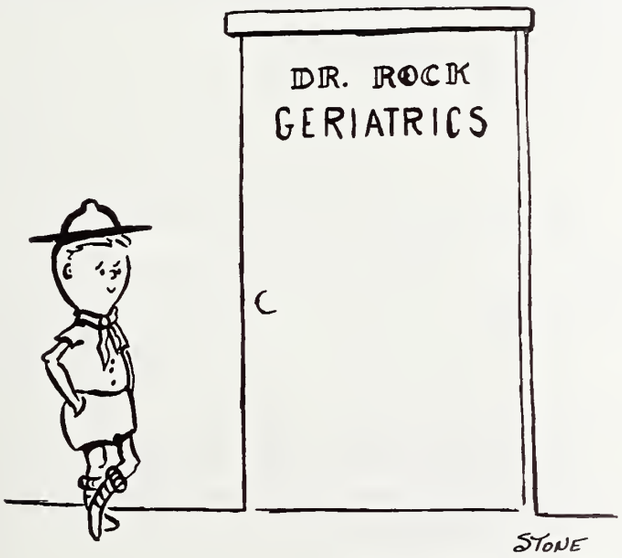
A new bridge across the gap between medical and legal services has been created by the George Washington University at the nation's capital. University officials announced organization of a new Institute of Forensic Medicine which will work with practicing physicians and attorneys as well as medical and law students. Prime purpose of the institute is to serve as a forum for the overlapping yet distinctly separated professions where interests are common, the announcement continued.

Dr. Murdock Head has assumed the chairmanship of the institute, spokesmen said. Eminently qualified, Head possesses M.D., LL.M., and D.D.S. degrees, is a practicing surgeon and a member of the bar in Virginia and the District of Columbia. Commenting on goals sought in organizing the new academic arm, Dr. Head states that ". . . a number of vital legal-medical problems require immediate attention.

"Locally, in the District of Columbia," he continues, "there is a serious controversy regarding laws governing the commitment of the insane, the need for additional judges for our juvenile court, and the establishment of centers for rehabilitation of children.

"On the national level, as well as in the District of Columbia," Head added, "a need for an objective look at medical legislation has become obvious; investigation of such topics as the coroner system, rising insurance costs, care of the aged, juvenile delinquency, and cases of medical and legal malpractice are clearly needed."

The institute will offer both classroom instruction as well as special symposia. Subject areas will include medical testimony, conduct of medical litigation, techniques of presenting medical evidence in criminal cases, medical legislation, and psychiatry and the law.



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Louisiana Solons Beat Cult Law

Mississippi's southern sister professional group, the Louisiana State Medical Society, has been embroiled in a no-holds-barred legislative hassle as Pelican state chiropractors recently sought legality and licensure during the new law-making session at Baton Rouge. The measure, H. 259, is said to have been killed in committee. It was sponsored by Representative John Lewis of Beauregard parish.

Four states have no chiropractic licensure statutes and have historically resisted legislative onslaughts to confer the stamp of legality and sanction on cultism. These are Louisiana, Massachusetts, Mississippi, and New York. Although some relatively few chiropractors flourish in each state, they do so outside of recognition by law and are, therefore, more vulnerable to prosecution for violation of medical practice acts. In all other states and the District of Columbia, some form of licensure defines chiropractic, permitting the cultists to ply their trade with certain immunities.

During the recent regular session of the Mississippi Legislature, no effort to seek chiropractic licensure materialized, despite pre-session threats. The New York legislature just killed the annual chiropractic bill.

Ob-Gyn Board Seeks Applications

The American Board of Obstetrics and Gynecology has announced that applications for certification new and reopened, part I, and requests for re-examination in part II are now being accepted.

Deadline for applications is August 1, 1960.

At the recent annual meeting in Chicago, the members of the Board passed a resolution eliminating the submission of case reports as part of the part I examination. However, each candidate eligible to take the part II examination must bring to the examination a duplicate list of hospital admissions as submitted with his application. This change in requirements is not retroactive and applies to candidates making application for the 1961 examinations.

The Board has resolved that applications for appraisal of incomplete training will no longer be accepted for review by the Residency Review Committee.

NEW MEMBERS

BELL, WALTERINE HERRINGTON, Winona. Born Decatur, Mississippi, March 18, 1933; M.D., University of Mississippi School of Medicine, Jackson, 1958; interned City of Memphis Hospitals, Memphis, Tennessee; elected May 10, 1960, by North Central District Medical Society.

COX, JOHN JULON, Meridian. Born Forsyth County, North Carolina, February 12, 1912; M.D., Duke University, Durham, North Carolina, 1939; interned U. S. Marine Hospital, Chicago, Illinois; residencies, Harvard University, Boston, Massachusetts, and U. S. Naval Hospital, Philadelphia, Pennsylvania, three years; certified by American Board of Dermatology and Syphilology, 1952; member American Academy of Dermatology and Syphilology; Captain, U. S. Navy, 19 years; elected April 5, 1960, by East Mississippi Medical Society.

GOODRICH, JACK KNIGHT, Jackson. Born Hardeman County, Tennessee, September 7, 1929; M.D., University of Tennessee, Memphis, 1953; interned Methodist Hospital, Memphis; fellowship, radiology, Ochsner Foundation Hospital, New Orleans, three years; member Southwestern Nuclear Medicine Society; Captain, U. S. Air Force, three years; elected April 5, 1960, by Central Medical Society.

MOORE, MALCOLM SIDNEY, SR., Tupelo. Born Fulton, Mississippi, October 8, 1933; M.D., University of Mississippi School of Medicine, Jackson, 1958; interned Greenville General Hospital, Greenville, South Carolina; elected March 8, 1960, by Northeast Mississippi Medical Society.

MOORE, ORA NELL CRAWFORD, Tupelo. Born Vicksburg, Mississippi, February 13, 1934; M.D., University of Mississippi School of Medicine, Jackson, 1958; interned Greenville General Hospital, Greenville, South Carolina; elected March 8, 1960 by Northeast Mississippi Medical Society.

NAGLE, BAKER GERALD, Morton. Born Sebastopol, Mississippi, January 6, 1932; M.D., Tulane University, New Orleans, 1956; interned Confederate Memorial Medical Center, Shreveport, Louisiana; Captain, U. S. Army, two years; elected March 8, 1960, by Northeast Mississippi Medical Society.

PAGE, MATTHEW JOHN, Greenville. Born Greenville, Mississippi, November 16, 1929; M.D., Meharry Medical College, Nashville, Tennessee, 1952; interned G. W. Hubbard Hospital, Nashville; Captain, U. S. Air Force, two years; elected to Scientific Membership, April 13, 1960, by Delta Medical Society.

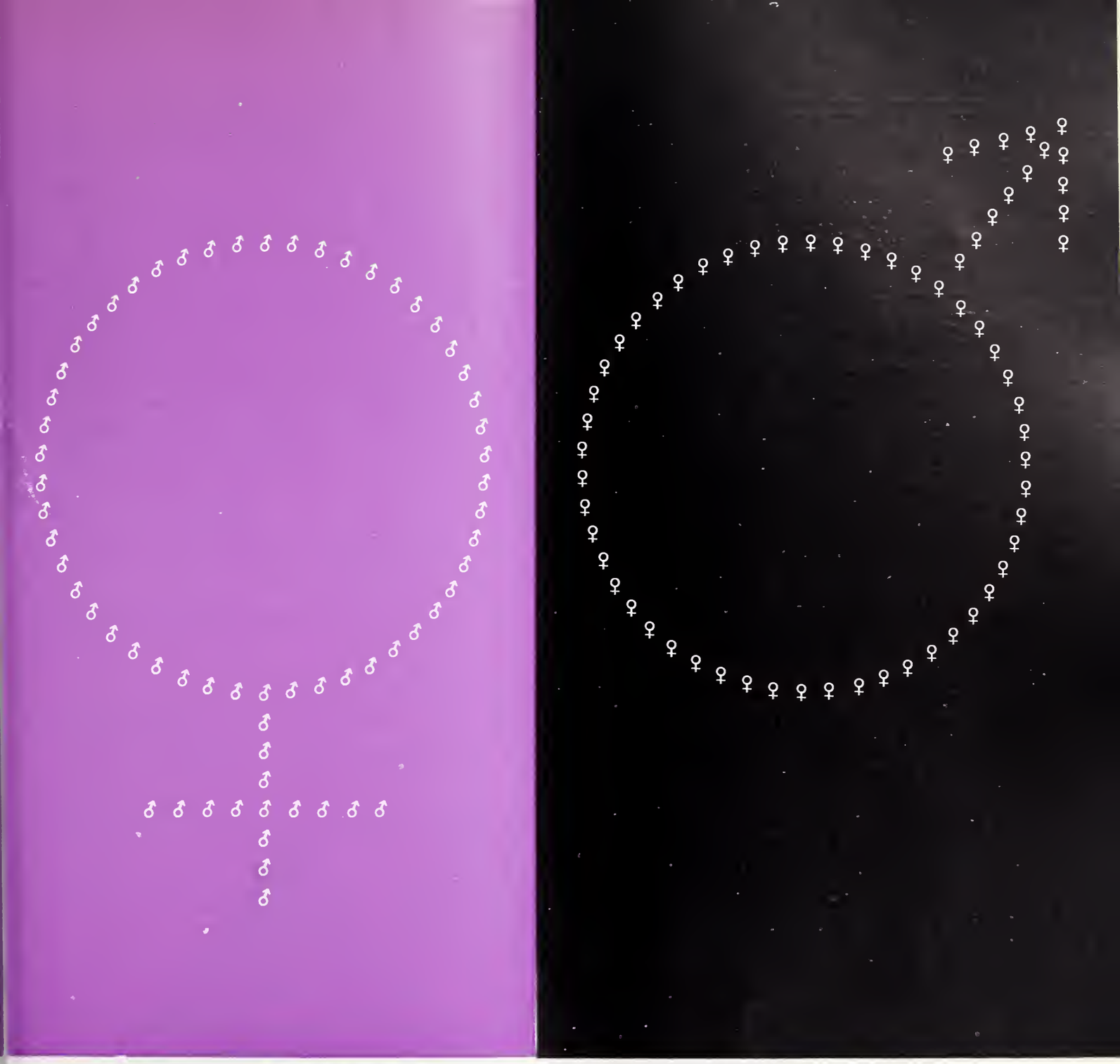
DEATHS

DONALDSON, HENRY CLAY, Robinsonville. M.D., Memphis Hospital Medical College, 1908; interned Natchez Charity Hospital; practiced medicine in Tunica County for 47 years; died May 16, 1960, aged 78.

IRBY, WILLIAM WALTER, Meridian. M.D., Mississippi Medical College, Meridian, 1910; postgraduate training at Tulane University; practiced medicine in the Meridian area for 50 years; emeritus member MSMA; died at Anderson Infirmary, Meridian, May 12, 1960, aged 79.

PENNINGTON, LOVE ELREE, Jackson. M.D., Emory University, Atlanta, 1915; interned Cherokee State Hospital, Iowa; psychiatric residencies University of Michigan and St. Peter State Hospital, Minnesota, three years; certified by American Board of Psychiatry and Neurology, 1944; member American Psychiatric Association; life member Mississippi State Psychiatric Association; past president, Baldwin County Medical Society; former superintendent, Longcliff-Logansport State Hospital, Indiana, and Cragmont, Madison, Indiana; founder Pennington Sanitarium, South Bend, Indiana; Clinical Director, Terrell State Hospital, Terrell, Texas; clinical instructor in psychiatry, University of Mississippi Teaching Hospital; First Lieutenant, U. S. Army, World War I, two years; died at St. Dominic-Jackson Memorial Hospital, May 15, 1960, aged 70.

SEALE, JOSEPH KENDRICK, JR., Greenville. M.D., University of Tennessee, Memphis, 1949; interned St. Louis City Hospital, Missouri; anesthesiology residency, Western Reserve University Hospitals, Cleveland, Ohio, two years; internal medicine residency, University of Mississippi Medical Center, Jackson, one year; died April 30, 1960, aged 34.



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* Marmell, M., and Prigot, A.: Tetracycline phosphate complex in the treatment of acute gonococcal urethritis in men. Antibiotic Med. & Clin. Ther. 6:108 (Feb.) 1959.

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French physicians are puzzled and excited over the plight of Carmela de Felice, 16 year old Parisian, who frequently complained of fatigue and chest pain. At St. Germaine-en-Laye Hospital, it was discovered that the girl had two hearts, one on either side. Another equally rare cardiovascular anomaly was the presence of five aortas, three on the right and two on the left. Both hearts have enlarged and now pose a severe threat to her life. Physicians hope to intervene surgically after several months of observation and case study.

—*United Press International*

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"Sure, I have dreams," came the prompt reply.

"And what do you dream about?" asked the physician kindly.

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"Don't you ever dream about pretty little girls?"

"What!—and lose my turn at bat!"

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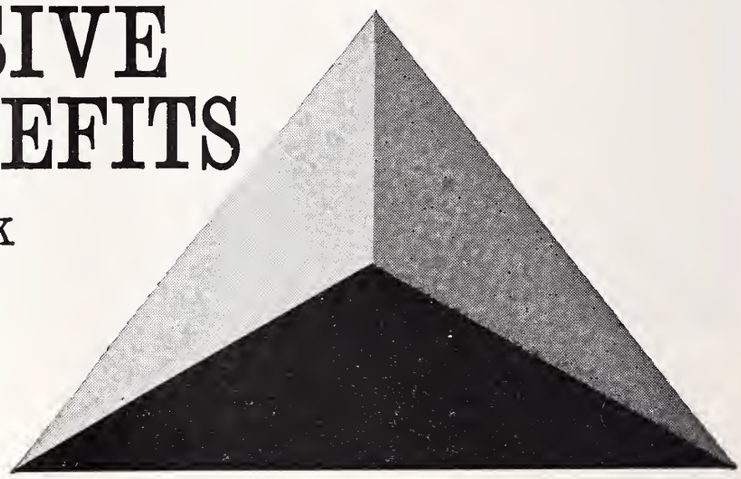

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REFERENCES: 1. Yow, E. M.: Practitioner 182:759, 1959. 2. Yow, M. D., and Womack, G. K.: Ann. N. Y. Acad. Sci. 76:363, 1958. 3. Bunn, P. A., Baltch, A., and Krajnyak, O.: Ibid. 76:109, 1958. 4. Council on Drugs, J.A.M.A. 172:699, 1960.

BRISTOL LABORATORIES, SYRACUSE, NEW YORK

Wisconsin Associations Publish News Guide

A guide to news relationships between newsmen, physicians, and hospitals has recently been published by the Wisconsin associations of these professions.

The result of three years work, the booklet was a joint project of the Wisconsin State Medical Society, hospital associations, and newspaper, radio, and television associations.

Recognizing the conflict between the public's right to know and the patient's right to privacy, the guide attempts to ease any problems which could arise by encouraging mutual understanding among the professions involved.

The booklet notes the duty of physicians and hospitals to give intelligent support to the news media in the field of reporting medical, scientific, and educational news. At the same time, the guide acknowledges that when the source of news is a physician, his patient or the hospital, the press assumes an obligation to consider the life and health of the patient and recognize the ethics by which the doctor is bound.

One section of the publication considers the inability of the physician to reveal certain information without the express consent of his patient. Another explains the right of the reporter to obtain information if it is considered part of the public record or a matter of concern to civil authorities.

A section dealing with hospitals recommends the designation of specific persons to be available at all times to answer inquiries from news media. It also points out that the health, privacy and legal right of the patient are of primary importance.

The guide gives methods by which county medical societies may assist the news media in items of community importance, including scientific news which may have local significance.

Copies of the booklet may be secured from the State Medical Society of Wisconsin, 330 E. Lakeside St., Madison 1, Wisconsin.

New Monograph Series Published by AHA

A new monograph series of interest to physicians, investigators and students in the cardiovascular field has been inaugurated by the American Heart Association.

adult stable diabetics and a significant number of sulfonylurea failures respond to

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"DBI is capable of restoring control in a considerable portion of patients in whom sulfonylurea compounds have failed, either primarily or secondarily."[5]

"All twelve secondary tolbutamide failures have done well on DBI."[6]

"34 out of 59 sulfonylurea primary failures were successfully treated with DBI."[7]

First publication in the series, a "Symposium on Congestive Heart Failure," brings together articles published originally in the January, February and March issues of *Circulation,* monthly journal of the American Heart Association. These were edited by Herrman L. Blumgart, M.D., Editor-in-Chief of *Circulation.*

Included are review articles by leading cardiologists on "Starling and the Concept of Heart Failure," "Hemodynamic Aspects of Congestive Heart Failure," "Metabolism of the Heart in Failure," "Kidney in Congestive Heart Failure," "Unusual Causes of Heart Failure," "Clinical Management of Congestive Heart Failure," "Correction of Hyponatremia in Congestive Heart Failure," "Clinical Consideration of Cor Pulmonale," "Pediatric Aspects of Congestive Heart Failure," "Congestive Phenomena Occurring in Pregnant Women With Heart Disease," and "Rehabilitation in Congestive Heart Failure."

Copies may be obtained at $2 from: Distribution Department, American Heart Association, 44 East 23rd Street, New York 10, N. Y.

Do-It-Yourself Psychotherapy

We-Knew-It-Had-to-Come Department: The latest in do-it-yourself devices, reports the June 6 *Insider's Newsletter,* are German records designed for men and women who have just completed analysis. The patient puts on the record, lies on a couch, and hears helpful positive suggestions from a qualified analyst. The series of three therapeutic discs can only be bought—like tranquilizers—on a physician's prescription.

Note for Sinus Sufferers

Have sinus? Stick to terra firma advises Dr. J. D. Worral. Speaking to a recent meeting of the Ontario Medical Association, Dr. Worral said that increasing air travel and the current boom in skin diving are both factors in the rise of chronic sinus cases. He recommends that chronic sinus sufferers stop flying and give up skin diving for six months. Complication: Many sinus suffering businessmen find flying an absolute necessity and numerous skin diving devotees would rather suffer from sinus than become landlubbers. However, the real unlucky ones are the sinus victims who are neither flyers nor skin divers. They have nothing to give up.

Insider's Newsletter, June 6, 1960

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1. Walker, R. S.: Brit. M. J. 2:405, 1959.
2. Odell, W. D., et al.: A.M.A. Arch. Int. Med. 102:520, 1958.
3. Pearlman, W.: Phenformin Symposium, Houston, Feb. 1959.
4. DeLawter, D. E., et al.: J.A.M.A. 171:1786 (Nov. 28) 1959.
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6. Miller, E. C.: Phenformin Symposium, Houston, Feb. 1959.
7. Krall, L. P.: Applied Therapeutics 2:137, 1960.

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Volume I
Number 8
August 1960

JOURNAL of the Mississippi STATE MEDICAL ASSOCIATION

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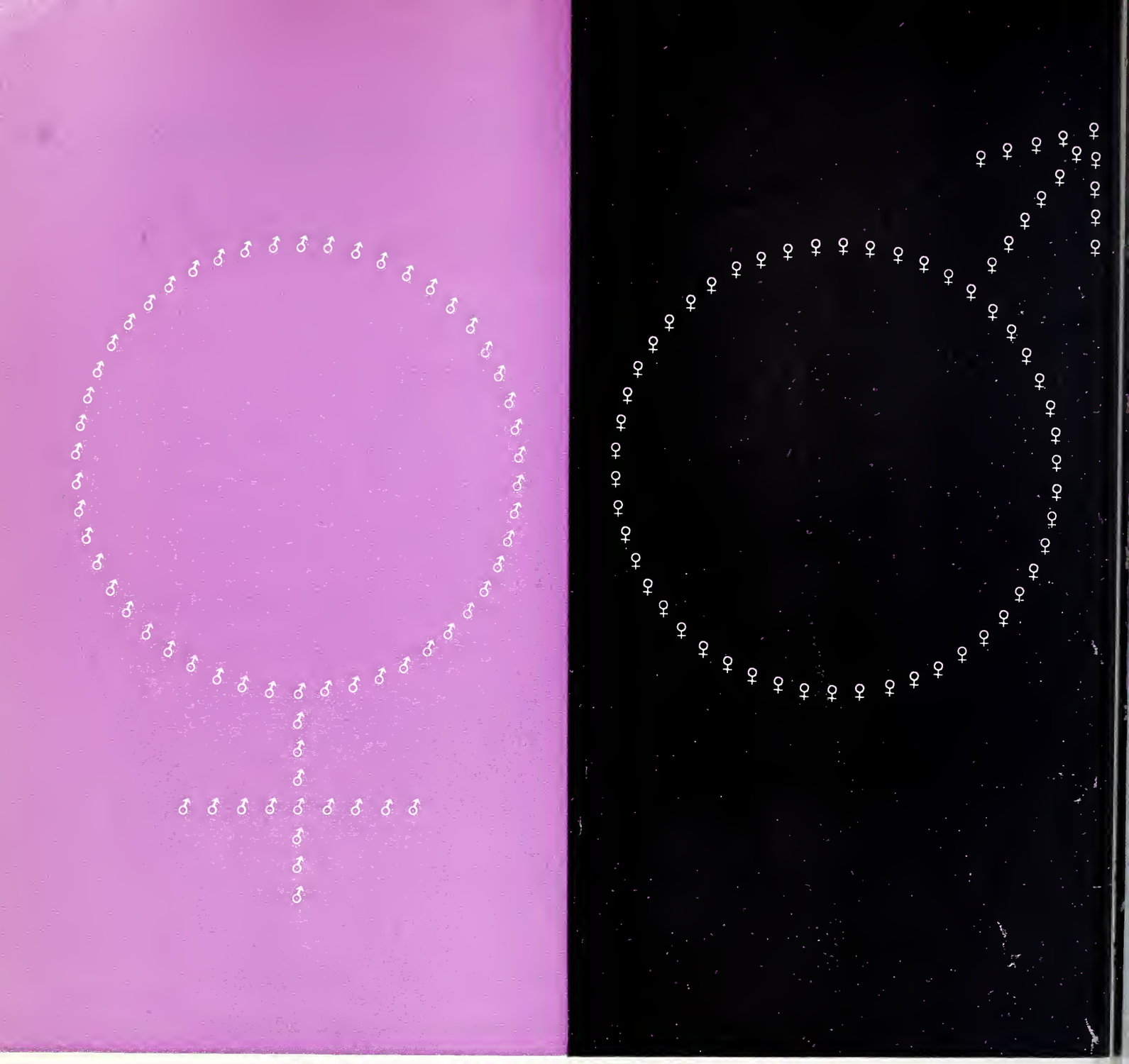

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* Marmell, M., and Prigot, A.: Tetracycline phosphate complex in the treatment of acute gonococcal urethritis in men. Antibiotic Med. & Clin. Ther. 6:108 (Feb.) 1959.

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NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

August 1960

Dear Doctor:

The Mills bill, H.R. 12580, federal-state medical care for "near needy" aged, breezed through House of Representatives with AMA support. Measure is so-called compromise for Forand and administration proposals of all-federal approach. AMA President-elect Leonard Larson testified in favor of bill's Title VI before Senate Committee on Finance just before political convention recess. Vigorous attempt will be made this month to restore Forand-type provisions, insiders say.

> The 184-page omnibus bill would also put physicians under compulsory Social Security and eliminate age 50 minimum for disability payments. Ironically, measure does exactly what AMA predicted in 1956 when opposing H.R. 7225, original pay-for-disability authority. MSMA is on record opposing entire package.

Forensic pathology was set back 10 years when new summer TV show, "Diagnosis: Unknown," hit CBS airwaves last month. The hour-long situation drama portrays antics of a crime-busting, neo-beatnik pathologist on Tuesday evenings. Estimate of show: Class shouldn't-B.

Despite Mississippi's new anti-fireworks law, the July 4 holiday celebration toted up a tragic toll of pyrotechnic injuries. One of the worst was at Lucedale where a fireworks stand exploded, critically burning four adults. New statute bans manufacture, sale, and possession of "dangerous" fireworks, allowing only class C items as defined by Interstate Commerce Commission classification.

Chief executives of states meeting at recent Glacier National Park governors conference voted two-to-one in favor of medical care of the aged under Social Security. The proposal was introduced by New York's Republican liberal, Nelson Rockefeller, but was pushed through 30-13 by Democrats.

Over 9,000 Jacksonians attended a July 6 benefit to help finance new St. Jude children's hospital at Memphis. Star attraction was TV comedian Danny Thomas who pays own expenses while raising money for ALSAC - Aiding Leukemia Stricken American Children - sponsor of the $3.5-million institution.

Sincerely,

Rowland B. Kennedy
Executive Secretary

AMA Supports Federal Aid For Medical Schools

Chicago - Acting under a 1951 policy, AMA came out for H.R. 6906, federal funds for medical, dental, and public health school construction. In a letter to the House Health and Safety Subcommittee, Dr. F. J.L. Blasingame said "...we believe...that there is sufficient need for assistance in the expansion, construction, and remodeling of the physical facilities of medical schools to justify a one-time expenditure of federal funds...." AMA endorsement recommended four changes which do not alter purpose of bill. MSMA opposes any federal funds for medical education.

Polio Funds Misused, Attorney General Charges

St. Paul - Charges of improper funds diversion by the executive director of the Sister Elizabeth Kenny Foundation were filed recently by Minnesota's attorney general. Marvin Kline, foundation executive officer, was said to have "drawn" $604,500 in salary and other benefits. Charges allege that only 1½ per cent of $1.5-million raised during one campaign was used for medical purposes, the rest going for "expenses."

FTC Hits Contact Lens Sellers

Washington - The Federal Trade Commission instituted a nationwide crackdown against alleged false advertising of contact lenses, charging 10 firms with misrepresentation. Claims challenged included those that "...all persons can wear contact lenses, that the lenses cause no discomfort, and that they offer a complete substitute for eye glasses." Included among the respondents are optometrists who have 30 days to reply to the complaint.

Plush California 'Dental Hospital' On Evil Days

Los Angeles - Southern California's first all-dental hospital is not beseiged by patients, according to the Associated Press, because its fees alone have a quieting effect on toothache. The swank facility charges $35 for outpatient service plus the dentist's fee and $50 per day for a room. Of 500 dentists appointed to the staff, only 80 have "hospitalized" patients. Greatest income is from outpatient clinic operating with dentists under contract to hospital.

Bay State Society Denied Ad Valorem Tax Exemption

Boston - The Massachusetts Medical Society must pay real estate taxes on its four-story headquarters building. So says the state supreme court, upholding the Boston tax assessor after the society filed suit for exemption. Court held that, while work of MMS was laudable, it still wasn't a charitable organization. Most state medical associations routinely pay ad valorem taxes on real estate owned.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

August 1960, Vol. I, No. 8

ORIGINAL PAPERS

Cosmetic Surgery

J. H. HENDRIX, Jr., M.D., and H. C. ETHERIDGE, M.D.

Jackson, Mississippi

Cosmetic surgery, although not a new discipline, is sometimes a controversial one. Some persons, both lay and medical, maintain that cosmetic surgery is needless surgery because "no one is perfect" or "beauty is as beauty does." The author holds that justification of any surgical procedure is the good it does the patient and that many cosmetic operations can be so justified. Five of the more common types of cosmetic surgery are discussed, and illustrations given.

COSMETIC SURGERY IS A TERM that does not meet with the favor of the plastic and reconstructive surgeon. It smacks of the theatrical. However, it has been, is now, and will continue to be used to denote that surgery which has to do with changing the appearance where a functional abnormality is not present.

Plastic surgeons, first as doctors and second as specialists, certainly do not condone or advocate needless surgery. And to some persons, both lay and medical, cosmetic surgery is needless. They maintain "that's the way you were born," "no one is perfect," or "beauty is as beauty does." Illogically enough, these same persons condone cleft lip repair, orthodontia, and permanent waves!

Certainly, the decision for cosmetic surgery is doubly serious. In an emergency, the physician does what he can and what he has to. In elective surgery of an abnormality, the decision is still narrowed by the obvious need. But in elective surgery, the decision to operate must be made after all factors have been considered by both the doctor and the patient.

There must be a discrimination between the patient who has faced his problem and possible solution realistically, and the patient who has hidden behind his, blames all life's tribulations on it, and expects the proverbial pot of gold at the end of his operation.

Most patients have a grasp of their problems and certainly are not vain, irresponsible people. There is a little vanity—yes—but not vanity of a bold or narcissistic type. Primarily, there is a desire to be pleasing in appearance and, if anything, less conspicuous than before, less odd, less vulnerable to the jibes of some ever-present "wit."

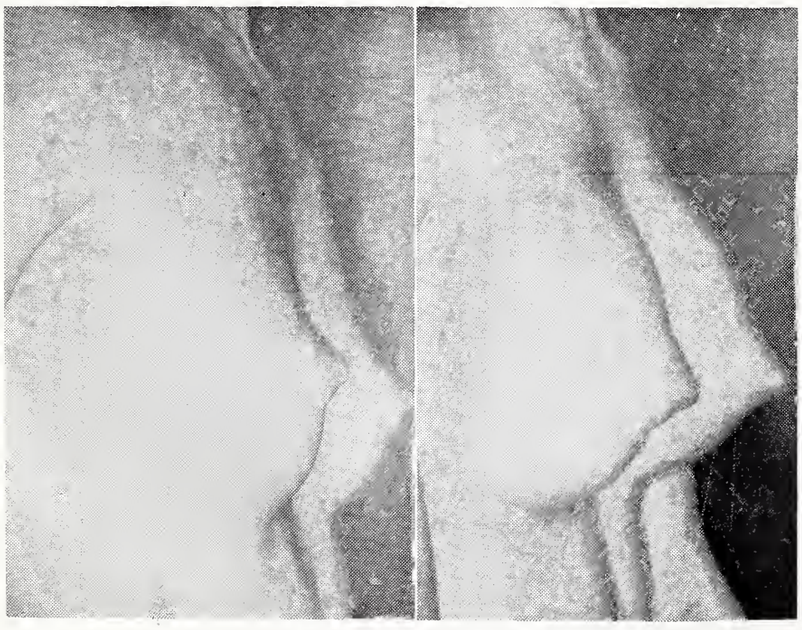
In view of the giant strides in other scientific fields, cosmetic surgery seems justified. Justification of any surgical procedure is the good it does the patient. It seems desirable to relieve an otherwise attractive young person of a nose worthy of Cyrano or a child of ears appropriate for Dumbo. They need the best physical attributes possible in order to get along in today's competitive society.

Read before the Section on Surgery, 92nd Annual Session, Mississippi State Medical Association, Jackson, May 10-12, 1960.

Case I. Nose with hump and side tip. Front and profile shots show nose before and after rhinoplasty.

CASES I-IV ILLUSTRATE RHINOPLASTY,

Case II. Left—Protruding ear showing absence of ridge of antihelix. Right—Post-op showing ridge of helix which has been formed as ear molded back.



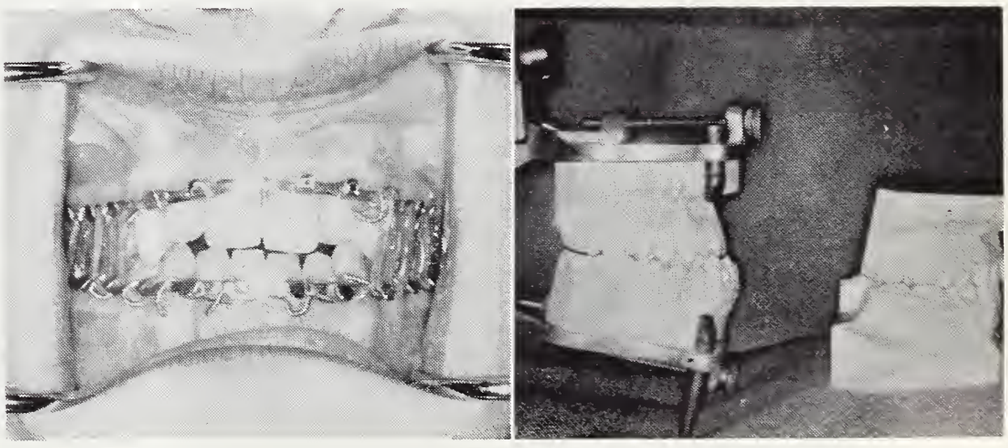
Case III. Left—Moderately small breasts. Right—Breasts after augmentation mammaplasty.

Case IV. Left—Prognathism with open bite. Right—Profile after sliding osteotomy of mandible through ascending ramus.

Case IV. Left—Post-op occlusion. Right—Prognathism with open bite.

OTOPLASTY, MAMMAPLASTY, AND OSTEOTOMY

Case IV. Left—Occlusion post-op with arch bars and elastic traction. Right—Dental models: pre-op on articulator, post-op on right.



The feature most often changed by surgery is the nose. A nose large or small, if not in pleasing proportion, is prominent and conspicuous. Other facial and bodily characteristics can be at least partially disguised through hair styles, cosmetics, and tasteful selection of garments, but the nose sits there, exposed to the world.

There is a type of patient with a nose complex who should be avoided if recognized. He is not going to be relieved by surgery no matter how successful the procedure. He needs psychiatric treatment first, surgery later, if at all.

Most patients, although self-conscious about their noses, have developed a healthy personality in spite of this self-consciousness. They feel, however, that an improved appearance will contribute to their happiness and satisfaction.

Nasal operations are usually done under local but general anesthesia may be used. In the case of the prominent or hump nose, intranasal incisions are used. The bony and cartilaginous hump is removed with saw or osteotome. This leaves a low wide bridge. The nasal bones are cut at cheek level and pushed in to narrow the dorsal line. The septum is then shortened to compensate for the lowering of the dorsal line. The alar cartilages are trimmed to narrow the tip to fit in with the overall nose.

Frequently the nose with a large hump or crook has an obstruction to the airway produced by a badly deviated septum. In properly lining up the nose this deformed septum is corrected by repositioning or submucous resection. The nose without its supporting structure, which has been lost by disease or trauma, can be given a ridge pole of bone or cartilage.

Postoperatively, there is only moderate discomfort, but the eyelids are markedly swollen for a few days. A molded splint is worn for approximately one week.

OTOPLASTY

Enlightened parents recognize the need of correction of their children's protruding ears. This should be done before the child enters school to be subjected to taunts of unthinking playmates. The correction is especially desirable for boys as they do not have hair to partially hide the deformity.

The operation consists of cutting and molding the cartilage so as to produce a pleasing rounded antihelix ridge. When this has been accomplished, the auricle is in the proper position in relation to the head.

The skin incision is made on the back side of the ear. A pressure dressing is worn for five to seven days.

SLIDING OSTEOTOMY FOR CORRECTION OF PROTRUDING OR RECEDING JAWS

The correction of the extremely protruding or receding jaw is not purely cosmetic as malocclusion of the teeth is a big factor. However, the biggest concern to the patient and his family is the appearance. It apparently is easier to bear the physical handicap of poor mastication than the cosmetic or esthetic handicap of the grotesque features.

Happily, the correction of the two is simultaneously accomplished by cutting one of the jaws at the predetermined site, sliding and repositioning of the mobile portion in the desired location, and fixing it there until healing has occurred.

MAMMAPLASTY

There are mammaplasties for both the overdeveloped breast and for the underdeveloped one. Properly speaking, reduction of the large breasts is not a purely cosmetic operation. These breasts are an abnormality, producing symptoms as such. To appreciate the condition, imagine carrying on your daily routine with a pair of eight-pound weights around your neck. Fatigue, backache, poor posture are all present in large amounts. Large breasts are not healthy breasts. Lactation is usually absent or greatly reduced and so need not be a consideration in the surgeon's decision.

During the last few years, admirers of the female figure have focused on the firm, well-rounded bosom as the criterion of beauty—so much so, that the woman with small or nonexistent breasts has become very self-conscious about herself. Falsies worn over a flat chest wall leave her insecure and are not the answer to her problem. No amount of talk will convince her that she is normal. She wants visible evidence that she is normal.

Also, there is another and larger group who are actually within normal limits of breast size and shape. But they, too, conscious of the emphasis on the bosom, will request enlargement and/or better contouring.

The easiest reduction operation is a partial amputation, remolding of the remaining gland, fashioning of the skin brassiere, and finally free grafting of the nipples in the proper position on the newly formed breasts.

The ideal tissue for breast augmentation is provided by pedicles of dermis and fat which can be obtained from the inframammary region.

After a decade of clinical and laboratory research plus a lot of fearful soul-searching, a fair percentage of plastic surgeons are using implants of plastic behind the gland and pectoral fascia to push the breasts forward and upward. These implants are not put into the gland tissue and most surgeons put them behind the pectoral fascia getting further away from the gland. Breasts with implants behind them look good, but the implants remain firm and consequently the breasts do not have a normal feel.

RHYTIDECTOMY

This hush-hush face lift operation is the dream or suppressed desire of many more women than realized. They hesitate to mention it to their husbands or to their personal physicians, who have always been consulted about problems of health, because husbands and physicians are prone to be relieved when there is nothing seriously wrong and to debunk what appears to be trivial.

Professional women and even men seek this operation when they become self-conscious about sagging face and neck skin which unnecessarily limits them in this highly competitive world. One man insisted for nearly a year that he needed the operation and that he could get a promotion if he had it. We did, and he did, much to our surprise.

Excess skin of the face develops due to thinning and spreading of the skin surface as aging occurs. An unsightly and uncomfortable condition may develop at an early age or while the individual is quite active and productive. When the eyelids are involved, they may actually interfere with vision.

This operation is usually done under local anesthesia. The usual face lift incision extends from the temple to mastoid process by jiggling around the ear along the tragus, around the lobule and up in the postauricular groove, and along the neck hairline. Wide undermining of the skin is necessary so that the skin is lifted up and placed in a new position where it re-adheres to the underlying muscles. The skin is undermined superficially so there is no danger of facial nerve injury.

Absolute hemostasis is a necessity, as a hematoma might ruin the whole job. The skin is pulled up until snug and the tension is evenly distributed between the temporal and mastoid areas. Fine line closure in front of the ear will prevent a visible scar. A pressure dressing is applied for several days.

There is not a sudden drop or fall later as some people fear. The process of aging does continue however, as time marches on.

SUMMARY

Everyone recognizes the necessity of cancer surgery, surgery of cleft lip or palate, or the grafting of burns. Fortunately, however, life's demands are not always of an emergency or urgent nature. Surgery also offers its contribution to things beyond the absolute necessities. ★★★

1151 North State Street

INVASION OF PRIVACY

A Madison Avenue advertising agency, acting in behalf of a cigarette-making client, was conducting a telephone survey of prominent persons to find out the brand of smokes they liked best. One telephone operator did fine until she got through to the late Dr. Alfred Kinsey, author of *Sexual Behavior in the Human Female*.

"We wish to ask you," she said pleasantly, "what brand of cigarettes you smoke."

The reply was shocking: "I never discuss my personal affairs for publication," the distinguished researcher snapped and hung up.

—Bennett Cerf, *The Life of the Party*

Case Report—Abdominal Mass With Pelvic Involvement

FRANK G. GRUICH, M.D.
Biloxi, Mississippi

This case concerns a white female, aged 54, with a large abdominal mass to xyphoid, umbilical hernia, and combination enterorectocele, with about four inches of the cervix prolapsed. A combined vaginal and abdominal approach was used for correction.

THE PATIENT, a 54-year-old white female, on initial consultation, had a presenting complaint of "a tumor in my belly and weakness." She stated that she had noticed the "tumor" getting bigger during the past several months. To her knowledge, the mass had been present for two years. Associated with this growth or mass, she had pain around "my navel." Menses stopped 14 years ago. Her one pregnancy ended in stillbirth. She said that she had had no sexual intercourse for a number of years "due to something sticking out of my birth canal." Her systems were normal except for the GU tract where she had noticed some burning and frequency.

PHYSICAL EXAMINATION

Physical examination showed a white female, pale skin, BP 130/80 and pulse 90. Examination of the abdomen revealed a large mass to xyphoid. The mass, which seemed to fill the lower pelvis, was firm and did not pulsate. The skin showed some dilated vessels. Also associated with this growth was a large umbilical hernia.

The cervix, which was smooth, stuck out of the vagina three or four inches and had a large balloon area under it. This area was replaced in the vagina but came out easily. Skene's and Bartholin's glands were normal.

Pelvic examination showed a semisolid mass in the cul-de-sac. The abdominal mass appeared to be fixed to the cervix. Recto-vaginal examination confirmed these findings.

LABORATORY DATA

The hemoglobin was 9.1 gm.; hematocrit, 36 per cent; blood chemistry—urea nitrogen, 17. Catheterized urine specimen had a specific gravity of 1.010 and was loaded with pus 100/125-HPF. Stained specimen showed gram negative bacteria. Culture showed Pseudomonas.

IVP revealed mass to xyphoid containing sections of mandible and teeth. There was a left hydro-ureter and hydronephrosis. Chest x-ray was normal.

TREATMENT

The patient was admitted to the hospital, and an indwelling catheter inserted. Chloromycetin was given orally. To correct the anemia of 9.1 gm. hemoglobin, 1,000 cc. of whole blood was given.

ECG was normal, and it was decided that the patient was a good risk for surgery. The intestinal tract was preped with Neomycin-Mycostatin, and the patient was placed on a low residue diet.

After four days, the patient was taken to surgery. Examination disclosed that about four inches of the cervix were prolapsed. The mouth was big and the neck small as if the cervix were under terrific tension. On sounding the cervical canal appeared to be eight inches in depth. The large balloon enterocele was replaced in the vagina but would not stay. The mucocutaneous junction of the posterior perineum was incised. By sharp dissection, the incision was carried to the cervix, which was roughly seven inches away. The so-called fascia on the vagina was dissected off the vagina.

Next, the balloon area was entered. Using a finger as a guide, a purse string suture was placed high up around the sac of the enterocele. This was then used as a guide. Before tying the suture,

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three interrupted sutures were placed laterally to pick up the so-called rectal fascia. After these were in place, the purse string was tied. Finally, the interrupted sutures were tied. The levator ani were also brought together with interrupted sutures. A large amount of the vagina was excised and the vagina was sutured with a continous interlocking chromic 1 catgut suture. The procedure was completed with interrupted sutures. An indwelling catheter was placed in the bladder.

ABDOMINAL APPROACH

An elliptical incision was made from the symphysis to about three inches above the umbilicus. The elliptical portion of the incision incorporated the umbilical hernia. The peritoneal cavity was entered through the incision below the umbilicus. With one finger in the peritoneal cavity, the umbilical mass was freed of its contents and under direct vision the previously described umbilical hernia was excised down to the fascia. Then the sac was incised, including the peritoneum.

The abdominal mass proved to be a pearly, yellow, fatty projection mass that was semi-cystic. The pelvic anatomy was distorted, with the large growth having three principle areas: one to the xyphoid, one to the right pelvic gutter, and one impacted into the cul-de-sac. Separate from this mass was a 7 x 8 cm. mass that occupied the area of the left ovary. Medial to this, toward the midline but farther than the midline, was another mass that felt like the dome of the uterus. The omentum that was attached to the main mass was clamped with Oschners, cut, and sutured with a cotton suture.

USE OF MURPHY DRIP

By a Murphy drip, the bladder was filled with methylene blue solution so its position in relation to the mass could be established. It proved to be encroached to the level of the umbilicus. By sharp dissection, the bladder was freed using the blue solution as a guide.

On examination, the primary mass appeared to originate from the right ovary. The right tube was identified. There was a large 1 x 2 cm. vessel going to this mass, which was triple clamped, cut, and double ligated with number 8 cotton.

This mass could be easily freed except in the cul-de-sac. By easy teasing, it was delivered from the abdomen. The pedicle of the mass near the uterus was triple clamped and removed.

The previously described small growth on the left was identified as the dome of the uterus. After locating the left hydroureter, the left ovarian mass was double clamped, cut, and double ligated with number 8 cotton. The methylene blue in the bladder served as guide. The vicinity where the round ligament came into the uterus was double clamped with straight Oschners. The ligament was cut and double ligated with chromic 1 catgut suture.

No gross tissues could be identified in the area two inches from the dome of the uterus, which was small. Everything was quite loose. No tissues could be palpated between the cervix and the dome of the uterus. After going about four inches, the uterus was amputated.

Using the endocervical canal as a guide, a sound was passed into the endocervical opening. It could be felt in the vagina. An Allis was placed where it came out into the vagina. The so-called flap was made anteriorly.

REMOVAL OF CERVIX

Still using the bladder filled with methylene blue solution as a guide, the cervical neck was followed to the cervix. By clamping with straight Oschners, cutting and suturing with a transfixing suture, this long cervix was removed. The measurement from the tip of the cervix to the uterus was 9½ inches. From the tip of the cervix to the body of the uterus measured 5½ inches.

The vaginal wall was closed with continous chromic 1 catgut suture. Then the previously described transfixing sutures on the cardinal ligaments were incorporated into the vagina. These were angle sutures. Finally, the round ligaments were incorporated into the center of the vaginal cuff.

Next, the surgery accomplished from the vaginal approach was marked with a purse string suture. By the Moscowitz procedure, the deep cul-de-sac was obliterated. Working extraperitoneally, the round ligaments on both sides were identified and sutured to the rectifascia muscles. This step was done to further strengthen the suspension of the vaginal cuff as this patient presented the possibility of vaginal prolapse following surgery.

REPERITONIZATION

Before reperitonization was done, the bladder again was filled with the dilute solution of methylene blue and no defect was seen. Reperitonization was completed with chromic 00 catgut suture.

The appendix was not removed, and the abdomen was closed with retention sutures in the usual manner, correcting the previously described

umbilical hernia. The patient stood the procedure well and was receiving her second bottle of blood at the end of the operation.

PATHOLOGICAL DIAGNOSIS

The specimen was sent to Dr. E. B. Wert, Mobile, who returned the following diagnosis: "Uterus with cervix, separate, with chronic cervicitis and fibroid tumor; polyp with endometrium; atrophy of endometrium; cystic teratoma of ovaries (dermoid). The epidermoid cyst includes many interesting structures such as a rather well-organized thyroid gland."

POSTOPERATIVE HISTORY

The patient made an uneventful recovery and was discharged on the ninth postoperative day with no residual urine and no morbidity. Immediately after surgery, the patient was given Distrycillin, 2 cc. every 12 hours, for three days, and was placed on Azo-Gantrisin on the fourth postoperative day. The indwelling catheter was removed on the fifth postoperative day.

On discharge patient was to continue on Azo-Gantrisin for three weeks. Despite the fact that narcotics were ordered for pain, she did not ask for any.

Patient was seen August 12, 1959, without complaints and the abdominal scar was well healed. Vaginal examination revealed the vaginal cuff to be well healed, good depth, and no residual cysto- or rectocele.

Patient was last seen on September 23, 1959, without any complaints. Pelvic examination revealed a good normal functioning vagina, and she had resumed her sex life.

SUMMARY

This case report has concerned a 54-year-old white female with a large umbilical hernia, mass to xyphoid which turned out to be dermoid, a large vaginal entero-rectocele, and a prolapse of the cervix to about four inches. She was treated by a combined vaginal and abdominal approach using a Murphy drip of methylene blue in the bladder as a guide. ★★★

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THE TIE THAT BINDS

Dr. Albert Schweitzer, legendary physician-philosopher-humanitarian of the Belgian Congo, concentrates so heavily upon his work that he sometimes neglects personal details. Once he was preparing to receive the governor general who was coming to visit the hospital. An aide, noting the physician's personal appearance, said, "Herr Doktor, this black tie you are wearing is already very much worn."

"I can't imagine why," the great man replied, "I have had it only 18 years and I have worn it only to christenings and funerals."

"Eighteen years!" was the astonished reaction. "Don't you have another, a second tie?"

"Fortunately not," said Dr. Schweitzer kindly, "my father had two and I recall that he was always looking for the better tie."

—Marion Preminger, *All I Want Is Everything*

Corneal Dystrophies

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Much has been learned about the nature of corneal dystrophies since the advent of the slit lamp. Before that time they were recognized as hereditary, potentially blinding diseases but there was considerable confusion within the group. The author discusses four dystrophies: classical hereditary, crystalline, Fuchs', and lipoidal. Prognosis, method of treatment, and eugenic considerations are presented.

For the past 70 years, the corneal dystrophies have been recognized as a group of hereditary, potentially blinding diseases. Until the generalized advent of the slit lamp, however, there was considerable confusion within the group and the occasional inclusion of nondystrophic conditions. Since the prognosis and treatment may vary considerably, the specific diagnosis is of more than passing interest.

TERMINOLOGY

Modern literature still, however, reflects some of the uncertainties of the past and perhaps a few words might be spent on terminology. Calhoun defines the term *dystrophy* as a developmental, usually hereditary, retrograde change in original corneal tissue because of nutritional defect. *Degenerations,* he characterizes by retrograde changes occurring in acquired corneal tissue. *Keratopathies* are particular degenerations which occur secondary to known causes such as injury, inflammation, or other disease. A broad clinical differentiation is the tendency for the corneal dystrophies to begin more centrally while the degenerations usually begin peripherally.

Four dystrophies will be considered in this paper:

A. Classical hereditary dystrophy
B. Crystalline dystrophy
C. Fuchs' dystrophy
D. Lipoidal dystrophy.

Such conditions as marginal degeneration, Salzmann's nodular dystrophy, and band-shaped keratopathy will not be included. Fuchs' dystrophy and lipoidal dystrophy are questionable members of the group but will be tentatively considered.

The first of the corneal dystrophies to be definitely tagged as having a genetic basis was that of nodular corneal dystrophy, first described by Groenouw in 1890. This condition, the nodular type, is one of three separate and distinct entities which are loosely grouped together as the classical hereditary dystrophies. Reticular dystrophy, the second of the group, was first described, interestingly enough, the same year by Biber, Haab, and Dimmer. Only a few years later Fleischer described the third lesion of this group, macular dystrophy. From that time until Buckeler's masterly work in 1938 the literature on this subject consisted of many reports of small series of cases.

BUCKELER'S INVESTIGATION

Buckeler's exhaustive investigation of 12 different family groups, controlled incidentally by the Nazi government, is responsible for our present clear-cut knowledge of the hereditary dystrophies.

The most common of these, the nodular likewise known as the granular corneal dystrophy, is inherited as a Mendelian dominant characteristic. Consequently, half of the children of each generation can be expected to be affected. This disease usually begins in the first ten years of life with a series of small white dots located in the central area of the superficial stroma. The dots may be connected by fine radiating lines which tend to

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disappear as the condition progresses. The slit lamp appearance of these spots has been described as that of small stones or crumbs with clear cornea lying between and at the corneal periphery. The deeper layers of the corneal stroma are likewise affected in later years. Visual acuity remains good usually until after the age of forty, then may never decrease a great deal. In the advanced lesion, however, there may be irregularity of the corneal surfaces and diminished corneal sensitivity.

MACULAR DYSTROPHY

Macular dystrophy, the second commonest type, is transmitted as a recessive trait, thus appearing in the children of healthy parents. It manifests itself in the first decade as a fine veil in the superficial stroma across the entire corneal surface. Usually, by the age of 20-30, the central area of the cornea beneath Bowman's membrane is covered by aggregates of large asymmetric white spots which in the periphery are found somewhat deeper in the cornea. Visual acuity is decreased in youth and is greatly curtailed during maturity. Corneal sensitivity is markedly decreased and the corneal epithelium, while intact, may be somewhat irregular and crossed by pigment lines.

RETICULAR DYSTROPHY

The reticular, or lattice-like dystrophy is the rarest type and is transmitted by a dominant gene. It first manifests itself in the early years of the second decade of life as a system of interlacing lines and loops in the superficial central corneal stroma. As the condition progresses, more and more of these lines appear with the older lines becoming thicker. The intervening parenchyma, which was at first clear, later becomes more lucent and superficial glassy nodules may appear. Visual acuity progressively diminishes until about the age of 30-40 at which time these patients are practically blind. Surface irregularity and decrease of corneal sensitivity also occurs in this condition. It was postulated that the interlacing lines might represent diseased corneal nerves, but this most interesting hypothesis has not been proven true.

Thomas summarizes the common factors of these three conditions as follows:

1. All are bilateral.
2. All commence within or about the first decade.
3. Corneal irregularity occurs with all.
4. Corneal sensitivity is decreased.
5. Vascularization is absent.
6. The central cornea is the first area affected.
7. Attacks of pain are common.
8. All are resistant to strictly medical therapy.
9. None is associated with any other disease or defect.

In recent years keratoplasty has occasionally proven successful in these conditions.

CRYSTALLINE CORNEAL DYSTROPHY

Crystalline corneal dystrophy, first described by Schnyder in 1939, is likewise a hereditary lesion being transmitted as a Mendelian dominant trait. The corneal changes may appear as early as infancy and thereafter increase very slowly without ever causing any inflammatory symptoms. In the central region of the cornea a slight cloudiness appears which by slit lamp examination is found to be composed of many irridescent fine crystals located beneath Bowman's membrane. The periphery of the opacity gradually extends toward the limbus, leaving, however, a narrow clear area between its margin and the limbus. Visual acuity is only moderately diminished and corneal sensitivity is unimpaired.

An important differential diagnosis is that of cystinuria in which the crystals resemble the hereditary corneal disease. Laboratory studies as well as the absence of familial history will rule this condition out, however.

FUCHS' CORNEAL DYSTROPHY

Perhaps the most common corneal dystrophy seen by American ophthalmologists is that of Fuchs' dystrophy. In 1910 Fuchs first described the final stages of this condition as one in which marked epithelial degenerative changes had occurred. Later investigation, however, revealed that what Fuchs was describing as an epithelial disease had begun many years before at the opposite thickness of the cornea as a primary endothelial disease.

Hassal, in 1846, and later Henle had previously reported on the finding of small excrescenses in the periphery of Descemet's membrane. Physiologically these thickenings represent endothelial secretions. While they are normally located in the periphery, in Fuchs' disease their primary location is centrally in the visual axis.

Berliner's texts on biomicroscopy contain drawings which beautifully illustrate these early endothelial lesions. Specular reflection by the slit lamp reveals the normal endothelium to resemble a

mosaic of golden hexagonal tile. In early endothelial disease, however, the mosaic is broken by tiny black areas in which the tile appears to be missing. Grade I Fuchs' dystrophy is characterized by endothelial changes which may be visualized only by specular reflection.

As the condition progresses and the nodules on Descemet's membrane become higher, the overlaying endothelial cells are flattened and thinned. The endothelium is able to maintain its integrity for a time, but the progression of the lesion is now evident by retroillumination. This corresponds to the Grade II disease.

GRADE III STAGE

Eventually the irregularities of Descemet's membrane become so prominent that folds occur with the production of the typical orange-peel appearance of cornea guttata. This is the Grade III stage and is visible by focal illumination. The integrity of the endothelium is eventually destroyed. Osmotic water balance of the cornea can no longer be maintained and epithelial edema with bullae formation occurs. This latter stage is, of course, Grade IV and corresponds to Fuchs' original observation.

Visual disturbance usually begins about Grade II and becomes most marked in the final stage. Considerable pain and discomfort usually accompany the last stage of this condition.

The incidence of the guttate stage is approximately 6 per cent of the adult population. It is found three times more frequently in the female, and usually begins in the fourth or fifth decade.

A point of considerable clinical importance is that, when no other cause for reduced visual acuity is found, endothelial dystrophy may be discovered if specular reflection is employed. Tonometry should be avoided in this condition and atraumatic methods of cataract extraction employed.

TREATMENT

Treatment for this condition has been fairly unsatisfactory. Posterior corneal transplants have been attempted but with little success. The neurosurgical division of the greater superficial petrosal nerve has in 40 to 50 per cent of cases, however, relieved much of the discomfort and somewhat improved the visual acuity of the full-blown disease. Steroids judiciously employed may, at least for a time, offer some relief of the attendant inflammatory changes present. Stocker has had some success with penetrating partial keratoplasties performed early in the disease but found that success depended on early surgery before the endothelial disease reached the periphery. Fortunately, the progress of the disease is usually quite slow. This in many cases allows nature to intervene before the final stages occur.

LIPOID DYSTROPHY

Lipoid dystrophy is, just as its name implies, the deposition of fat and cholesterol in the corneal stroma. The great majority of cases are secondary to injury or disease and strictly speaking should be classified as lipoidal degeneration. A hereditary group of primary lipoid deposition also occurs, however, and while characteristics of both conditions are much the same this paper will deal with the rarer of the two types.

The primary lipoid dystrophy is generally bilateral, more prevalent in females, has no racial predilection, and is more apt to be associated with the overweight individual.

Clinically, the first sign of lipoid deposition is a gray or grayish nebula which may begin peripherally or centrally. The disease may be further divided clinically into three stages: (1) the early active, (2) the mature, and (3) the retrograde stages.

EARLY ACTIVE STAGE

In the early active stage a deep vascular loop is noted to push inward from the margins, accompanied by fine fatty droplets with a resulting loss of transparency in this area. As the lesion expands more vascular penetration with branching and infiltration occurs. This process may continue for many weeks or months. In the mature lesion, the posterior stroma becomes swollen and thickened. Characteristically, the epithelium is undisturbed and an endothelial cell wall may form. The number of vessels involved is in direct proportion to the severity of the process and recovery is more prompt with invasion of fewer vessels. A mild uveitis is characteristic of this stage and diminution of corneal sensitivity may occur.

In the retrograde stage, folds appear in Descemet's membrane as the fatty infiltrates are absorbed. A yellowish pigmentation and blood vessel remains may persist.

The corneal involvement at any particular stage determines visual acuity and may range from good useful vision to complete impairment. A rigid low cholesterol diet is the only treatment which effects resolution of the lesion. This treatment is most effective in the early stages but is worthwhile even in the mature lesion. The inflammatory features of the disease may be ameliorated with topical or systemic corticosteroids.

Histologically lymphocytes, large pale histiocytes, cholesterol crystals, and mutual fats occupy Bowman's zone and the interlamellar areas of the cornea. The blood cholesterol is characteristically elevated.

SUMMARY

The clinical characteristics of the corneal dystrophies have been discussed. Their prognosis and methods of treatment have been presented. Early diagnosis is urged so that not only can early treatment be instituted but in the blinding forms some provision made for future visual loss. Eugenically, the affected individual should be advised if the disease is expected in his children. ★★★

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Adoption: to Tell or Not to Tell

A study just reported to the American Medical Association throws new light on the importance of the method and timing of giving a child information of his adopted status. California psychiatrist Dr. Marshall D. Schechter, who made the report, revealed that the number of young patients in this category has risen 100 per cent over a five-year period in his own private practice. The Menninger Foundation reports that one-third of all patients admitted to the Menninger outpatient clinic are adopted. Documenting his report with 24 studies made by leading authorities on the problems of adoption, Dr. Schechter concludes that the need for a different approach to when and how to tell a child is now apparent.

In an interview with *The Insider's Newsletter,* Dr. Schechter said adoptive agencies force prospective foster parents to tell the child he is adopted as soon as possible— usually about the age of 3. At this age a child can't fully comprehend the idea of another set of parents, and the immature ego can't cope with the knowledge of the rejection by its original parents. The validity of enforcing this early information policy on a child has never been tested. Dr. Schechter suggests:

1. Giving the adopted 3-year-old a simple explanation of birth itself when he asks where he came from. (Adoptive agencies recommend implanting the idea that he "grew inside another woman" and advocate constant use of the words "adoption" and "adopted" in conversation, so the child will become conditioned to them.)
2. Waiting until at least age 5 or 6 before trying to explain the concept of adoption, and then only if the child is happy and secure.
3. Not telling a child "We picked you because we wanted you more than all the others"—he'll wonder why his real parents didn't feel that way.
4. Never using the fact of his adoption as a club over his head—many foster parents, despairing over the difficulties of child-rearing, can cause deep personality damage by attributing a child's wrong-doing to his heredity.

Boils, Carbuncles, and Impetigo

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Much has been written in recent years about staphylococcal infections which are resistant to the majority of antibiotics. The author reviews the subject, placing primary emphasis on treatment. He concludes that physicians should use the newer antibiotics with restraint to lessen the chance of organisms becoming resistant.

In recent years there has been more and more emphasis on staphylococcal infections which are resistant to the majority of antibiotics. At first this was primarily a problem in hospitalized patients, and staphylococci found in the general population showed little or no resistance. During the past year there has been an increase in staph skin infections seen in office practice which do not respond to antibiotic therapy.

In one respect, this organism is responsible for the antibiotic era. Fleming in 1929 first observed the antibacterial effects of Penicillium notatum on a culture plate contaminated with staphylococci.

The organism is widely distributed. Potentially pathogenic forms are carried in the noses of 50 per cent of the population.

The pathological appearance of impetigo, furuncles, and carbuncles is well known and need not be discussed. Impetigo, because of its superficial nature, is still fairly easily controlled with local treatment. Drugs such as ammoniated mercury and gentian violet, which were effective prior to the antibiotic era, are still effective. Ointments containing Neomycin or Bacitracin are also usually effective. For any of these to work, however, it is necessary for the drug to reach the lesion. Consequently, the patient should always be instructed to remove all crusts with soap and water each time prior to applying medications. The surrounding skin should be kept clean with frequent washings of soap and water, and all clothes that come into contact with the lesion should be changed frequently.

Recurrent furuncles and carbuncles caused by antibiotic resistant staphylococci are treated locally and systemically. Of the two, the local treatment is probably the more important.

The lesions are treated three to four times daily with hot compresses of boric acid or magnesium sulfate solutions. The surrounding skin is washed three times daily with pHisoderm or Dial soap followed by alcohol sponging of the area. All clothes including bed linens are changed and washed daily.

The role of surgical treatment of these lesions is of doubtful value. There is such early central necrosis which allows drainage to the skin that most furuncles and carbuncles have already started draining before the patient consults the doctor. Attempts to enlarge the opening by incision through the surrounding tissue tends to spread the infection. During the acute stage the core is thick and tenacious, and attempts to remove it only further aggravate the lesion.

The systemic treatment consists first of correcting any associated pathology such as diabetes, anemia, malnutrition, or any other condition which tends to make the patient more susceptible to infection. Antibiotics remain the treatment of choice for staph skin infections. Ideally, sensitivity studies should be made of the offending organism, but this is not always readily available to the small town practitioner. Even when these tests are available, a drug which shows little antibacterial activity in sensitivity tests may be effective when taken by the patient.

In each locality, there is usually one or more broad spectrum antibiotic which is still effective. In general, it is the antibiotic which is least used in that area. I should like to add here that if a

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patient can take sulfonamides, they should be given in conjunction with broad spectrum drugs. This is one of the most overlooked of the present effective drugs.

The use of two or more broad spectrum drugs at the same time is probably of less value than has been reported. This often gives the organism a chance to get resistant to two drugs instead of one. If the drug chosen proves effective, continue it at full therapeutic doses until all lesions show no evidence of activity. If some necrotic tissue or core remains to harbor organisms, a return of the furuncles can be expected. The recurring furuncles are usually resistant to the medication formerly used.

In the event that no antibiotics are effective, some lesions can be controlled with staph toxoid. This is of little or no value in the treatment of acute lesions and does not take the place of the treatment outlined earlier. The response to staph toxoid varies widely from patient to patient. The three following cases show most of the variations.

CASE 1

This 50-year-old white female, who was in good general health, had a three month history of recurrent staph skin infections—both furuncles and secondary infections of practically all minor cuts and abrasions. She had had adequate dosages of tetracycline, oleandomycin, and penicillin without significant influence on the lesions. Staph toxoid was given subcutaneously at biweekly intervals and of increasing dosage. After one week there were no new lesions and all existing lesions were disappearing. The injections were continued for one month. She has had no further furuncles during the past six months.

CASE 2

The patient, a 69-year-old white male, was debilitated and in poor general condition due to long standing hypertension. He had a three and one-half month history of persistent furuncles over both thighs, buttocks, and back. He had received adequate doses of chloramphenicol, tetracycline, and oleandomycin with no improvement. After one month of staph toxoid injections at biweekly intervals, he received biweekly injections of staph vaccine for another month. The only change in the lesions was that they were smaller, less painful, and of shorter duration. This patient also had x-ray treatment to the larger lesions and had taken more baths than most men take in a life time. During the six months since he received the toxoid injections, he still had small furuncles which formed every two to three weeks. These are now self-limited and not very painful.

CASE 3

This 25-year-old white female was in good general health. She had a two month history of recurrent staph furuncles which did not respond to several types of antibiotics. After one injection of staph toxoid the furuncles began to disappear. This disappearance was similar to that seen 10 years ago following a penicillin injection. The staph toxoid was continued for two weeks. One week after stopping the injections another furuncle formed. After two injections of staph toxoid this disappeared. Three weeks later another furuncle formed which disappeared after one injection. There have been no new ones during the past four months.

All of these patients were also observing the hygenic measures outlined earlier.

These widely different responses to staph toxoid indicate this is not the answer to the staph skin problem. In certain cases, however, it is of definite value and the injections should be given for a period of at least one month.

The final answer to antibiotic resistant organisms has not been found. Each member of the medical profession should use the newer antibiotics with restraint so that there will be less chance of organisms becoming resistant. By doing this, there will always be a drug to fall back on in cases of critically ill patients. ★★★

WHY JOHNNY WILL BRUSH

Newest promotion stunt for juvenile dental health are toothbrushes with realistic flavor smells. Johnson and Johnson, through their "Tek" dental products division, will soon market a child's toothbrush with handles exuding such mouth-watering flavors as strawberry, orange, lemon, lime, and chocolate. Trick is in plastics manufacture and the effect is limited to olfactory perception.

Atherosclerosis in 1960

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The lipid nature of the lesions of atherosclerosis has been known for over a hundred years, but only recently, as other causes of death have been controlled, has intensive investigation of the disease been undertaken. Methods for its recognition in the absence of complications are still unsatisfactory, and the many treatment approaches that have been tried have failed to alter its course with certainty. Presently, the best control is obtained by avoiding obesity while continuing regular and moderate exercise. Promising areas of investigation now being explored include blood coagulation and fibrinolysis, and inhibition of endogenous cholesterol synthesis.

It has been known for over 100 years that various lipids constitute a major part of the lesions of atherosclerosis. The first experimental lesions simulating the disease in humans were produced about 50 years ago in rabbits by the simple expedient of feeding them cholesterol. Abnormalities of cholesterol and other lipids have been a prominent part of the picture in all experimentally produced lesions so far. The idea persisted for a long time that atherosclerosis was an inevitable consequence of aging related in some way to the presence of cholesterol in the blood. Lesions were thought to be the product of a simple filtering process which took cholesterol and other lipids from the blood and deposited them in vessel walls. Relatively little thought had been given to efforts to control it until about 1950. Then as a result of progress in the management of other diseases, atherosclerosis became an important public health problem.

DEVELOPMENTS IN THE 1950's

It was logical that the first treatment should be dietary restriction. Americans have always gone enthusiastically for dietary fads, and most available evidence supported the view that ingested lipids were involved in some way in the development of the lesions. The first substance singled out to be eliminated from the diet was cholesterol. While patients were being advised by most physicians to restrict the amount of preformed cholesterol ingested, it became recognized that cholesterol was an obligate constituent of animals cells and was present in herbivores that never eat any of it; that is, it is synthesized in the animal body. It was demonstrated also that changes in serum lipid levels resulting from restriction of dietary cholesterol were small and transient, and attention turned to the limitation of other fatty components of the diet.

Meanwhile, efforts were afoot to devise some means of recognizing the asymptomatic disease, assessing its extent, and defining which subjects would suffer from its complications. At first it was thought that laboratory procedures such as ultracentrifugal or electrophoretic analysis of the serum lipid pattern could single out the patients who would develop complications. There were opposing schools of thought on the subject, though, and differences of opinion became so clear-cut that the American Heart Association appointed a committee of experts to go into the matter. It was the majority opinion that while much progress had been made toward unraveling the metabolic defects associated with atherogenesis, no method of detecting subjects who could be expected to develop complications of atherosclerosis had been devised that was any better than the serum cholesterol level.[1]

From the Department of Medicine, University of Mississippi School of Medicine.
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Inability to explain the pathogenesis of the disease, or even to recognize its presence in the absence of complications, has not stopped the progress in treatment. During the past decade the emphasis has gone from cholesterol through fats of all kinds to specific animal fats. Currently it has settled on calories in general. In addition, other efforts at therapy have involved phospholipids, surface active agents, anticoagulants, phytosterols, unsaturated fatty acids, nicotinic acid, and other substances which have been administered either in addition to or instead of some dietary restriction. All of these have seemed at least for a while to influence the serum lipid pattern toward a more nearly normal state, but none has yet been consistently effective.

PRESENT STATUS

There is still no satisfactory means for diagnosing or appreciating the extent of asymptomatic atherosclerosis. The study of the disease is limited in a large part to the study of its complications such as cerebral and myocardial infarction, or to the study of factors thought to be related to its development such as cholesterol. However, progress in defining the problem and understanding the nature of the disease has been rapid during the past decade.

At the pragmatic therapeutic level today it is felt that disorders of serum lipids and protein almost certainly are involved in atherogenesis. The most rational approach to their control available at present is simply to avoid obesity while continuing moderate and regular exercise. Research continues on all fronts, but a few presently active areas deserve special mention.

CHOLESTEROL INHIBITORS

Much interest has been aroused by the development of substances, such as MER-29, which are capable of inhibiting cholesterol synthesis within the body.[2] It is thought that these provide what might be referred to as a shunt by means of which precursors of cholesterol are diverted into the normal pathways of metabolic degradation. If this works in clinical application, it may be possible at least to keep the serum cholesterol level low for long periods of time and to determine whether this in itself will influence the course of the disease.

Duguid observed in 1946 that small fibrin clots sometimes are deposited on normal arterial endothelium and subsequently become organized and undergo degenerative changes to form lesions which are indistinguishable from atheromata.[3] If this proves to be an important mechanism of atherogenesis, studies in the rapidly expanding though still confused area of blood coagulation and fibrinolysis may contribute significantly to an understanding of atherosclerosis. Knowledge of these mechanisms is important also because of their probable relation to the development of complications of atherosclerosis.

ANTICOAGULATION

After all, atherosclerosis itself can be completely asymptomatic, even when it has progressed to the occlusive stage, provided adequate collateral circulation develops concomitantly. It is the acute occlusive complications, usually involving thrombosis at some point in their development, which are responsible for the most important results of the disease. Anticoagulation has been used for a number of years in an attempt to control this aspect of the problem, but criteria of adequate anticoagulation are difficult to establish and even more difficult to maintain. This approach, even under the best of circumstances, is still controversial.

THE BANTU

It has been emphasized recently that the Bantu, a race of people who have a low incidence of myocardial infarction and a high incidence of chronic liver disease by our standards, do have, contrary to earlier observations, a considerable amount of atherosclerosis.[4, 5] The difference seems to be that they do not develop thrombi in the large coronary vessels. It has been demonstrated that these people have considerably more fibrinolytic activity in their blood than do controls.[6] How this relates to their liver disease and whether it has anything to do with atherogenesis or death from myocardial infarction are questions which have not been answered. However, they offer a promising area for speculation and investigation. Observations in Americans and Europeans in this regard have not been published as yet.

SUMMARY

Though medical science still does not know what causes atherosclerosis or how to control it or its complications, progress is being made at a rapid rate. At present atherosclerosis is best controlled by avoiding obesity while continuing moderate and regular exercise.

Promising research efforts are those concerned with inhibition of cholesterol synthesis and with

fibrinolytic mechanisms. The latter may be important especially in understanding the complications of atherosclerosis. ★★★

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'Humanize' Office, Keystone Doctors Told

Pennsylvania physicians were given a timely reminder by their state society on humanizing professional offices as a valuable public relations project. A special mailing to the membership of the giant state organization frankly asked, "Have you tried recently to look at your reception room through the eyes of your patients? Does it properly suggest the high standard of medical service you provide? Is it appropriate for your present practice?"

The advice given Keystone state doctors cautioned that ". . . your office and reception room should appear sufficiently businesslike to convey a quick message of competence and orderliness. They also should have the lived-in look which invites ease and relaxation." Suggestions included having the physician ask a friend with a bent for decorating to look the office over and to solicit advice from businessmen on impressions of efficiency.

A handy checklist stressed six points in reception room suitability. First was the size and adequacy for peak patient loads. A second point was furniture arrangement for conversation-group privacy and optimum illumination. A cheerful room was stressed third, suggesting the woman's touch for eye appeal. Fourth, the doctor should provide storage for coats, umbrellas, and other wraps to reduce space waste and clutter.

Proper heating and ventilation are a fifth must, the admonition continued, so that patients are comfortable in all seasons. A variety of current popular magazines, pamphlets, and reading material is the sixth item which also recommends a few well-chosen books for children.

An individual touch of something extra for reception rooms includes pleasant wall pictures, an appropriate plaque inviting frank discussion of fees, and a name plate for the receptionist's desk. Family groups portraits were said to add a personal, yet dignified, note in the physician's private office or consultation room.

Progressive Patient Care: Cure for Sick Hospitals?

ROWLAND B. KENNEDY
Jackson, Mississippi

Progressive patient care is a new departure in hospital service. By offering separate facilities for the seriously ill, those ill but not dangerously so, and for those who require hospital services but can meet their own bodily needs, the health team is utilized more effectively in serving the patient. PPC is patient-oriented and the physician-patient relationship is the hub of activity in this unconventional hospital organization and clinical environment. Economies follow new efficiencies, as the Manchester, Connecticut, pioneer program has demonstrated. As today's exciting health care innovation, PPC may be the accepted standard in tomorrow's hospital.

PPC MAY SOMEDAY become the most important abbreviation in the American physician's medical vocabulary. It signifies "progressive patient care," a totally new concept of in- and outpatient service, probably the first notable departure in 2,000 years of hospital care of the sick. The idea is simple: Patients are systematically classified according to their medical needs, admitted to a section of the hospital where these needs can be effectively met, and served by the team of physicians, nurses, ancillary personnel, and physical plant better at less cost. But more importantly, the PPC concept is a "patient-centered" rather than a "hospital-centered" approach.

PPC PHILOSOPHY

About 150 American hospitals are inaugurating this unconventional program begun at Manchester, Connecticut, in 1956 and another 400 are in various stages of planning for PPC. The 40 year old, 300 bed Manchester Memorial Hospital pioneered the progressive concept when trustees, medical staff, and other members of the health care team took a long look at patient complaints, then-low institutional efficiency, and mounting costs. Dr. Howard J. Lockwald, a Manchester staff member, has this to say about PPC:

"Philosophically, the program is patient-oriented. The patient is the *raison d'être* of the hospital, therefore, his total needs are considered. The doctor-patient relationship is the hub of patient care. All other services such as dietary, nursing, physiotherapy, and diagnostic procedures radiate from this center of activity as the spokes of a wheel. Forming the rim and holding each in its proper perspective and function is the administrator."

Executive Secretary, Mississippi State Medical Association.

Progressive patient care is not closed panel medicine nor does it affect full, free choice of physician in any manner. It is simply a clinical method of caring for the sick and injured with greater professional efficiency and effectiveness. If anything, PPC strengthens the traditional pattern of private medical care in a hospital because all its benefits are aimed in the patient's direction.

CONCEPT SIMPLE, LOGICAL

Since disease and injury have many shapes and phases, physicians have had the habit of classifying, sorting, and cataloging conditions in order to seek specific entities and to effect specific cures, the Manchester studies declare. But the same studies point up a common denominator in disease and injury, however they may differ—a degree of illness. Three degree categories show up: The seriously ill who may not be able to make

their needs known and who require intensive nursing care; secondly, there are those who are ill but not dangerously so and who can make their needs known; and, third, there are patients who can provide for their own bodily needs but still require hospital services. Progressive patient care meets each level of need efficiently but does so with the minimum expenditure of personnel, supplies, and physical facility.

LEVELS OF CARE

Because PPC permits systematic classification of patients according to medical need, hospital service is organized at levels of care intensity rather than by economic status or type of disease viewpoint. The classic Manchester pattern begins with three units: (1) The special care unit for the seriously ill, (2) the intermediate care unit for those ill but not seriously so, and (3) the self-service unit for those able to answer their own bodily needs.

Two additional levels of care have emerged in the Manchester plan to serve patients who can't be classified in the tri-level degrees-of-illness categories. One is the continuation care unit for the chronically ill whose hospital stay is unpredictable and the other is the home care program for those not requiring complete inpatient service but who can benefit from follow-up medical supervision and preventive services in their own homes.

THE 'WHY' OF PPC ECONOMICS

Most hospitals compute costs of operation on a *per diem* basis. This means that the administrator averages his institution's cost per patient and charges all such individuals the same basic amount. The patient admitted for a tissue culture pays basically the same as the patient in the next room who underwent cardiovascular surgery. Under the Manchester plan, a patient is charged for the services and facilities he *uses,* not a cost figure designed to level out the expense of operating the entire hospital.

In the Connecticut model, special care unit charges are $26 per day, while intermediate care accommodations are $18 and self-service, $11. As new hospitals are designed and built especially for progressive patient care programs, construction economies will be realized, too, thereby lowering initial investments and subsequent depreciation expense.

And if PPC is valid, then fully half of the general medical and surgical beds in the United States are basically unutilized because almost every such bed is an acute care unit. Since less than half of all hospital patients are not seriously ill in terms of PPC definitions, this seems a waste, especially in the light of every-mounting hospital care costs. For the luxury of pursuing clinical conventionality, the patient must pay—one way or another. Of course, this is not true of *every* hospital bed because more than half of all such facilities in the nation are in special purpose institutions among which are mental, tuberculosis, and other single entity categories not readily adaptable to the PPC concept.

The American Medical Association's *Chronic Illness Newsletter* suggests this hint of optimism about PPC: "In the area of costs, there are still many questions to be answered and problems to be solved. However, the progressive patient care concept offers a glimmer of hope in reducing the costs of hospital care. With construction and equipment costs rising, the possibility of cutting building costs and reducing equipment needs through more efficient utilization provides hope. And with personnel accounting for some 85 per cent of hospitalization costs and professional nursing itself over 50 per cent of these costs, certainly more efficient use of personnel offers ever more hope."

PPC MECHANICS—THE BETTER WAY?

The special care unit in a PPC institution looks much like any good general medical and surgical hospital. Yet, it is more than that. Here, intensive, round-the-clock care is rendered the critically or seriously ill who require a maximum of medical and nursing service. Immediately available to each bed are oxygen, suction and intravenous apparatus, blood, the full chemotherapeutic armamentarium, and specially skilled nursing and technological personnel. In some respects, services are equal to those available in the typical postoperative recovery room. The sole criteria for admission to this unit is severity of condition.

In this maximum treatment unit, there is no mad rush for equipment, drugs, and supplies. There is no sending for special assistants when the physician meets crucial situations. Emergency cases are admitted without delay, bypassing both the admissions office and the emergency room. This is the Manchester experience.

At the special care level, surgical cases constitute about 60 per cent of the case census, examples of which are intestinal perforation, gastrectomy, cholecystectomy, hysterectomy, pneumonectomy, prostatectomy, eye operations, care of major injury from trauma, neurosurgery, cardiovascular operations, and conditions of similar gravity requiring surgical intervention. Almost all

other admissions are medical including cardiovascular conditions, massive overwhelming infection, gastrointestinal bleeding, intracranial hemorrhage, and severe neuropsychiatric cases, to cite a few. A small number of acute pediatric cases are admitted.

In stages of more advanced development, special care units meet diversified problems presented by the acutely ill through further subdivision. First, an open area is provided for observation of several patients at one time. A second logical grouping is by private accommodation for control of clinical environment where isolation, noise, and restraint are considerations. The third area is a flexible zone of semiprivate beds for treatment continuity in the intensive care unit.

INTERMEDIATE CARE UNIT

Patients who are ill enough to require a moderate amount of nursing care are assigned to the intermediate care level. Here are found those with uncomplicated appendectomies, hemorrhoidectomies, vein ligations, and maternity cases, for example. Typical medical admissions include pneumonia, colitis, and hepatitis cases, This, by far, is the largest number of beds in a PPC-organized hospital. Most patients in the intermediate care unit have a predictable hospital stay. Some are transferred down from special care services while many are admitted directly.

Postsurgical and medically convalescent intermediate level patients are those who are beginning to meet their own needs, such as self-feeding and bathing. In fewer words, they are moving away from acute illness and they are not chronically ill. At Manchester, a majority of all patients are admitted directly to this unit, remain on it during hospitalization, and are discharged from it after receiving needed treatment. Their medical needs are constant and of short duration. This level of care generally duplicates—in purpose if not in scope—the services found in conventional hospitals. The third and least intensive level of care is new on the institutional scene.

SELF-SERVICE: QUALITY WITH ECONOMY

To get an idea of self-service facilities in a PPC hospital, think of a modern, functional, but not necessarily luxurious motel. This unconventional approach to in-institutional care meets the needs of the ambulatory convalescent, patients requiring hospital supervision during extensive diagnostic tests, and those who for one reason or another are better cared for in a medical environment than in their homes.

Self-service patients bathe and dress themselves, walk to the laboratory and x-ray department, and take their meals in a cafeteria where diet is controlled but served to please the patient's appetite and the hospital's pocketbook. With a minimum of physician and nurse attention—as compared with intensive and intermediate levels of care—self-service patients may receive instruction for special recovery regimens, easily effecting the transition from illness to health before discharge from the hospital. As the patient's physical independence is increased, staff and equipment requirements for his care and maintenance decrease.

The postcoronary patient regains his confidence and the diabetic learns his new self-care responsibilities and diet limitations. The mild depressive is easily managed and the postsurgical patient need no longer be subjected to routines necessary in the higher levels of care. Most self-service patients may receive visitors almost without restriction, including children.

CONTINUATION AND HOME CARE LEVELS

No hospital has been spared the difficult problems of the chronically ill or those who need its services but aren't sick enough to be inpatients. Most authorities agree that chronic disease patients are admitted for two principal reasons: Exacerbations of the chronic disease or by reason of an illness complicating the long term condition. More often than not, the chronically ill patients are faced with an indefinite, unpredictable period of hospitalization requiring care just beyond that available in nursing homes.

At Manchester, the continuation care unit ". . . assumed the problems of care in hemiplegia, amputation, severe trauma, malignancy, and severe intractable cardiac decompensation. The unit did not involve the complicated procedures of rehabilitation but was restoration-oriented. The nurses provided care centered about a program directed at the activities of daily living."

The home care unit permits active follow-up of patients who can benefit from professional and hospital services but whose medical needs are not sufficiently urgent to demand constant inpatient service. Visiting nurse programs, intermittent physiotherapy, recurring diagnostic procedures of a minor nature, and similar services assist physicians in long term case management.

When a patient who has been seriously ill can be transferred from the special care unit down to

the intermediate level, his recovery is dramatized. At this and the self-service levels, he finds himself in a clinical environment conducive to regaining personal independence. To the patient, physical progress becomes a symbol of medical progress in overcoming disease, say the Manchester authorities.

PSYCHOLOGICAL LIFT

PPC helps meet the inevitable series of psychological adjustments every hospital patient must face. The acutely ill have no choice but to have others make decisions for them. As recovery progresses, the patient can shake off this total dependency, become convalescent, and eventually assume responsibility again for bodily need—all within the clinical environment. And this vital readjustment involves minimum use of acute care facilities and personnel, as the man on the mend needs less and less specialized attention. Many emotional hazards of convalescence are either minimized or eliminated.

Although proponents of PPC make no sweeping claims of better cures per dollar per day, they do have impressive statistics on shorter periods of hospitalization, another bright spot for the patient. In all Connecticut general medical and surgical hospitals during 1957-58, there was an average of 41 discharges per bed per year. In Manchester Memorial, there were 51 discharges per bed. The average patient stay for all hospitals in the state was 7.6 days while PPC admissions were out after only 6.4 days.

PPC AND THE COST OF CARE

Since 1929, significant changes have occurred in the medical cost picture. Today, the American public expends greater sums than ever before on health services. While these mounting expenditures reflect more in terms of rising living standards than in actual cost increases, they are sometimes the principal target of the state medicine advocates. Over a 20 year span, the costs of all goods and services are up just over 200 per cent but hospital costs have zoomed to the 356 per cent level. Yet, the cost of physicians' services is up only 170 per cent, notably less than all other goods and services which people must have.

In 31 years, the nation's medical care dollar components have shifted considerably from predepression health service spending. In 1929, hospitals got 13.7 cents of the medical care dollar but today their share is up to more than 30 cents. The physician's fee was 32.6 cents but it's down to 24.5 cents and not all of that, by any means, is paid for professional services while an inpatient. This pronounced trend emphasizes the importance of hospital costs in the total medical care situation, another economic argument for PPC from the consumer's viewpoint.

Although equipment and physical plant economies implicit in progressive care programs are important, personnel utilization efficiency is paramount. Paramedical resources are not in bountiful supply anywhere and even when available in bare adequacy, they are still expensive. Prior to the advent of PPC, Manchester Memorial averaged 3.2 hours of nursing care per patient in a 24 hour period. Today, the average is 4.6 hours yet its operating cost in 20 per cent less than the average of 17 other Connecticut hospitals of comparable size and assumed capability.

Progressive patient care can pave the way for near-miracles in skilled personnel utilization with a helping hand from the electronics industry. Some pilot plant trials are underway where closed circuit television helps fewer nurses to observe more patients. Intercommunication systems between hospital bed and patient service facilities decreases paramedical footwork.

Exciting experiments in prefabricated plastic room and bath units are being reported, suggesting a future decrease in hospital construction costs. Electronic cooking already reduces food preparation time as much as 80 per cent.

PPC FOR EVERY HOSPITAL?

The American Medical Association observes that ". . . progressive patient care is, of course, not a panacea for all (these) hospital problems. Nor can a general hospital convert to this type of care program without major organization, physical, and administrative changes. However, some existing hospitals may find it possible to incorporate one or two of the units described as a part of their care program. And new hospitals now being planned might well consider the possibilities presented by this different concept in patient care."

PPC serves best when it is instituted for the primary purpose of securing better patient care with available hospital service resources. To initiate this radical program for purely economic reasons alone might produce a disappointing result. It does offer economies but more importantly, PPC holds a promise of doing a better job for the sick with what the hospital already has or can get without great difficulty. As today's exciting innovation, the plan may be the accepted standard in tomorrow's hospital. ★★★

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Caveat Chairman

If you're not one up, you're one down. This is the credo of Dr. George L. Engels' pithy essay in a recent issue of *Psychosomatic Medicine* appropriately tagged "On Timesmanship" as quoted in the May 1960 *Executive*. Dr. Engels is apparently expert at crafty indoor sport of beat-the-chairman-out-of-five-more-minutes when presenting a scientific paper. In fact, he has made a science of it and pity the hapless chairman who falls victim to an essayist skilled in the cunning art of this rostrum witchcraft and lectern legerdemain.

A silent struggle rages between chairman and essayist at every scientific session, according to Dr. Engels. The former wishes only to run off the program with reasonable adherence to a schedule while the latter is likely to employ every device fair or foul to squeeze out more time for his *magnum opus*. The simple scientist reading a paper hasn't a chance to get an extra minute, but the expert places the chairman at an immediate disadvantage. Here are the more popular techniques:

Buttoning the coat: About one or two minutes before the assigned time has expired, the speaker steps back slightly from the podium and buttons the middle button of his jacket which he has carefully kept unbuttoned. This is taken by the trusting chairman as an intent to conclude the paper and is usually good for an additional three minutes.

Removing the eyeglasses: Almost any chairman falls for this one, especially when the essayist straightens the manuscript, removes the glasses, and puts them ostentatiously in the left breast pocket. The myopic speaker now brings his head closer to the paper while the presbyopic essayist must step back. The myopic speaker has the additional advantage of no longer being able to see the chairman—or the audience, either—so without these usual distractions, he may gain as much as five more minutes.

The "in conclusion" technique: About a minute before time is to be called, the speaker starts introducing each new paragraph with such phrases as "in conclusion, finally, in summary, or to sum up." It takes a courageous chairman to cut down a speaker in the act of ending his paper.

The blank page device: This is an advanced, sneaky technique, requiring careful preparation and planning. Before mounting the rostrum, the essayist inserts a number of blank pages toward the end of the paper. When he sees that the chairman is about to call time, he quickly flips the blanks over, regretfully remarking something about the necessity of skipping valuable material. After such self-sacrifice on the part of the essayist, few chairmen are willing to make time tyrants of themselves. Good for about six more minutes.

The Groomkin technique: This smooth system was devised in 1953 by a Dr. Groomkin who had little to say but always managed to get more time in which to say it. In this maneuver, the speaker approaches the lectern with a bulky manuscript but immediately puts the chairman and audience at ease by stating that he has much too much paper for the allotted time and, hence, will read only the summary. Dr. Groomkin once parlayed this device into ten extra minutes before the chairman realized he was reading the entire paper.

The microphone snatch: This is a risky technique and should be employed only as a last resort in time larceny. When finally flagged down by the chairman, the speaker simply grabs the microphone and continues to talk as he leaves the rostrum. This is good for as many words as the length of the cable will allow. Essayists are cautioned to execute this technique with great care since the literature records two Colles' fractures, one subdural hematoma, and multiple contusions of the face among its users.

Clinicopathological Conference VII

Conducted by the Department of Pathology
Veterans Administration Center
Jackson, Mississippi

This month's CPC, a regular Journal MSMA feature, comes from the Jackson Veterans Administration Hospital. It involves a 56-year-old Negro male who was first admitted to the hospital on July 30, 1956, with a pleuropulmonary disease process with gastrointestinal involvement. During his 100-day hospitalization he gained 14 pounds and was discharged on October 18 with no sign of anemia. The patient was again admitted on May 19, 1958, with a history of progressive exertional dyspnea during the preceding year, paroxysmal nocturnal dyspnea and orthopnea for the preceding four months, pedal edema for two weeks, and lower abdominal cramping for the past two years. On the fifth hospital day he expired suddenly. Participants in CPC VII are Dr. Leo Elson, medical service, and Dr. Elizabeth Ferrington, laboratory service.

THIS 56-YEAR-OLD NEGRO male farmer was first admitted to the tuberuclosis service of the Jackson Veterans Administration Hospital on July 30, 1956, with the chief complaint of pain in the right chest.

Patient reported good health until January 1956, at which time he developed chills, fever, and pleuritic pains in the right chest. Following an x-ray of the chest, penicillin therapy was instituted. For two or three months he continued to have fever and chest pain. There was no associated cough or hemoptysis. For several months prior to admission he had been troubled by muscular weakness and had lost weight. Following another chest x-ray, he was referred to this hospital. At the time of admission the pain in the right chest on deep breathing was milder than it had been several months earlier. Weakness was still a prominent symptom.

Since the summer of 1955, patient had experienced occasional cramping periumbilical pains, which at times became diffuse. These usually occurred about 30 minutes after meals, but occasionally before meals if he became very hungry. The pain was not precipitated by any particular foods. His abdomen would often become distended. Patient denied dysphagia, diarrhea, melena, mucus or pus in the stools, or jaundice.

In 1943 while in military service, he was a tuberculosis suspect; but after a 30-day period of observation, he was returned to duty. He smoked one-half package of cigarettes daily. Alcohol had never been used to excess.

Physical examination revealed that the temperature was 99, pulse 80, respirations 20, BP 142/90. The patient was a well-developed, poorly nourished negro male. The retinal arteries showed mild tortuosity. There was limitation of expansion of the right chest. Percussion note was dull at the right base anteriorly and laterally to the midaxillary line, with diminished breath sounds over this area. No pleural rub or rales were audible. Cardiac enlargement was not detectable and there were no murmurs. All peripheral pulses were present. There was mild tenderness without spasm in the periumbilical area. Liver and spleen were not felt.

Laboratory examinations on admission revealed the following: The white cell count was 8,900, hemoglobin 10 gm., hematocrit 35 per cent, PMN 51 per cent, L. 37 per cent, M. 1 per cent, E. 9 per cent; ESR 34 mm. per hour. Urine showed a specific gravity of 1.020, albumin and sugar negative, microscopic negative. STS negative. A stool specimen was positive for occult blood (2+) and showed no ova, cysts or parasites. Stool culture was negative for enteric pathogens. Several sputum examinations were negative for AFB by smear and culture. X-ray of chest (Fig. 1) showed

crowding together of the vascular markings at the right base with increased density extending to the hilum, suggesting atelectasis of the right lower lobe. A small pleural effusion was present at the right base, extending into the outer end of the horizontal fissure, and there appeared to be some emphysema of the middle lobe. The heart showed no gross enlargement, though rounding of the left border suggested some left ventricular hypertrophy. The aorta showed some uncoiling.

HOSPITAL PROGRESS

During his 100-day period of hospitalization, the vital signs were normal. During the early period of hospitalization, patient suffered repeated bouts of abdominal pain, associated with tenderness and distention. At no time were there any respiratory complaints. A serial chest x-ray on August 2, 1956, showed almost complete clearing of the atelectatic and pleuritic process at the right base. Abdominal films in the supine and erect positions, taken on August 2, during an attack of abdominal pain and distention, showed distended loops of small bowel in the right lower abdomen. Some of these showed fluid levels in the erect position; air was present in the colon. Findings were thought to be compatible with a local area of reflex ileus, associated with or adjacent to an area of inflammation in the right lower abdomen.

X-RAY FINDINGS

Roentgenograms of the upper GI tract on August 16 failed to disclose any evidence of a lesion in the esophagus, stomach or duodenum; there was no gastric or duodenal retention at four hours. A barium enema on August 13 failed to disclose any intrinsic lesion of the large bowl or of the terminal ileum.

A sigmoidoscopic examination was normal. Bronchoscopic examination and Papanicolaou studies of the bronchial washings were negative. During the last four weeks of hospitalization, the abdominal complaints subsided, patient gained weight from 125 to 139 pounds, and the hemoglobin increased to 14 gm. He was fed a regular diet and received no specific medication. He was discharged October 18, to be followed in the Outpatient Clinic.

In January 1957, when seen in the Outpatient Clinic, patient complained of easy fatigability,

Figure 1. Chest x-ray during first admission showing atelectasis of the right lower lobe, a small pleural effusion at the right base extending into the horizonal fissure, and rounding of the left cardiac border.

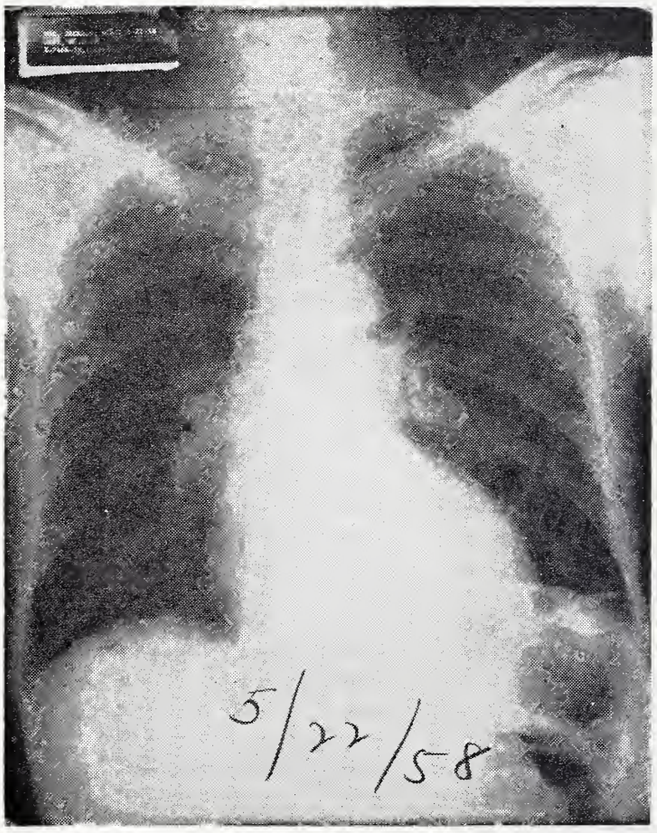

Figure 2. Chest x-ray taken during second admission demonstrating some atelectatic areas in the lower lung fields bilaterally moderate left ventricular enlargement and tortuosity of the aorta.

weakness, abdominal cramping pains, and shortness of breath on exertion. Chest x-ray at this time showed no change from previous findings. A sputum specimen was negative for AFB.

SECOND ADMISSION

Patient was admitted to the Medical Service May 19, 1958, with a history of progressive exertional dyspnea during the preceding year, paroxysmal nocturnal and orthopnea for the preceding four months, pedal edema for two weeks, and lower abdominal cramping for the past two years. Four months prior to admission he sustained a massive rectal hemorrhage, consisting of "one gallon" of bright red blood, and since that time there had been three or four tarry stools, in addition to a number of stools containing small amounts of fresh blood. In the six months prior to admission patient had suffered a 19-pound weight loss. Two weeks prior to admission when dependent edema appeared, patient was digitalized and a diuretic administered.

PHYSICAL EXAMINATION

Physical examination revealed temperature 98, pulse 82, BP 100/50, weight 120 pounds. Patient was sparsely nourished and chronically ill. The neck veins were engorged but not pulsatile. The fundi disclosed AV nicking, but no hemorrhages or exudates. Oral hygiene was poor and the breath was foul. The gums showed a bluish color but did not bleed easily. Expansion of the chest was generally restricted. Percussion note was resonant posteriorly, hyperresonant anteriorly. Breath sounds were vesicular and of diminished intensity; there were no rales or rubs. The PMI was forceful and measured 10.5 cm. to the left of the midsternal line in the fifth interspace.

CARDIAC AND LAB REPORTS

A Grade II, coarse, low-pitched, systolic murmur was audible along the lower left sternal border, maximal at the third interspace where a faint thrill was palpable. The rhythm was regular and there was no diastolic gallop. Pulses were palpable in all four extremities. The abdomen was distended but there was no shifting dullness. Liver edge was not palpable but there was increased resistance to palpation in the right upper quadrant. There was no sacral or dependent edema. Lymph nodes were not enlarged.

Laboratory work on admission revealed the white cell count was 7,600, PMN 38 per cent, L. 62 per cent, hemoglobin 9 gm., ESR 27 mm. per hour, hematocrit 31 vol. per cent, serum cholesterol 195 mgm. per 100 cc., BUN 57.6 mg. per cent, creatinine 3.2 mg. per cent, sodium 110 mEq., potassium 4.7 mEq., chlorides 84 mEq., CO_2 26.6 mEq. Stools negative for occult blood, ova, cysts and parasites. X-ray of the chest (Fig. 2) showed some atelectatic areas in the lower lung fields bilaterally and moderate left ventricular enlargement; the aorta was tortuous. An electrocardiogram (Fig. 3) showed a left axis deviation of minus 60 degrees; QRS 0.14 sec.; ST segments depressed in leads 1, AVL V_{4-5-6}; T_1, V_{4-5-6} were diphasic. The record was interpreted as showing a left-sided intraventricular conduction defect and digitalis effects.

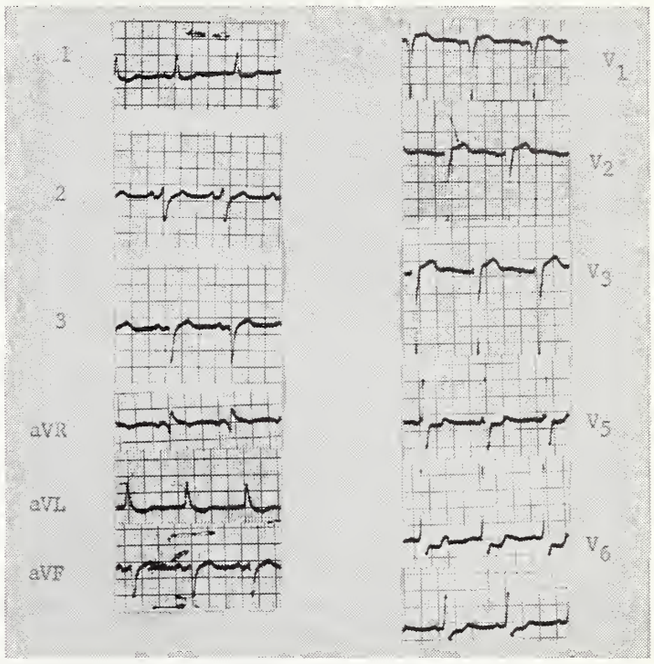

Figure 3. Electrocardiogram tracing.

Patient was afebrile at the time of admission and remained so during the brief hospital course except for one elevation to 99.8°. On admission he was placed on a 200 mg. sodium diet, digitalis and oxygen. The only complaints were weakness and anorexia. On the fifth hospital day he expired suddenly. Only a few minutes earlier he had been observed and his condition had appeared satisfactory.

DISCUSSION

Dr. Leo Elson: "The first admission of this 56-year-old colored male was occasioned by a pleuropulmonary disease process which, judging from the six-month history of fever, weight loss and pleuritic chest pain, suggested a chronic inflammatory disorder compatible with tuberculosis, sarcoidosis or fungus infection. The chest x-ray

(Fig. 1) revealed the presence of atelectasis, raising the possibility that the pneumonitis and pleuritis might be secondary to neoplastic bronchostenosis. Bacteriologic and Papanicolaou studies, as well as bronchoscopic examination, were unenlightening. With the unexpected resolution of the pleurisy and pneumonia on the 13th hospital day, it appeared that the lung lesion was an acute affair and that tuberculosis, sarcoidosis or mycotic infection could be reasonably excluded. However, no plausible diagnosis comes to mind to explain the six-month history of fever, weight loss, and chest pain. That the patient was indeed suffering from some latent chronic ailment is suggested by the fairly severe anemia present on admission.

GASTROINTESTINAL DISTRESS

"The cause of the gastrointestinal complaints which had been present for one year, namely the postprandial periumbilical cramping and abdominal distention, was not clarified by the gastrointestinal series or sigmoidoscopy. A finding, which assumes added significance in the light of subsequent events, was the presence in the chest film of increased convexity of the left ventricular border. Apparently at this time the patient suffered no cardiac symptoms and there was no evidence of hypertension.

"The record shows that the patient gained weight during the first hospital admission and at the time of discharge the anemia had disappeared. However, the continuance of his illness was shown by the continuing complaints of fatigue, weakness, abdominal pains and, for the first time, shortness of breath, when examined in the Outpatient Department in January 1957, two months after discharge.

SECOND ADMISSION

"The second and final admission was brief—death occurring on the fifth hospital day. Such a brief period of observation obviously precluded any definitive studies. The diagnosis under such circumstances must of necessity be provisional. One can do little more than consider the possibilities, in the light of their statistical frequencies, giving due weight to those that best account for the significant clinical features.

"In this instance, these were: (1) symptoms of progressive cardiac insufficiency for one year or more, (2) gastrointestinal bleeding on several occasions during the four months prior to admission, including one massive hemorrhage, (3) 19-pound weight loss, (4) physical and x-ray evidence of cardiac enlargement, a systolic murmur and thrill at the left lower sternal border, and electrocardiographic evidence of myocardial damage, (5) laboratory findings of an anemia, hyponatremia, and hypochloremia, and a moderate azotemia. The clinical picture, then, was one of chronic congestive heart failure with a characteristic electrolyte disturbance (dilution hyponatremia), and of anemia which, in the light of the gastrointestinal bleeding, was probably, but not necessarily, the result of blood loss.

"The nature of the underlying cardiac disease was not revealed by the history or clinical findings. The diagnostic problem confronting us is the determination of the etiology of heart disease in a middle-aged colored male in the absence of the banal causes, such as hypertension, manifest coronary disease, rheumatic fever or valvular disease. Among the uncommon causes of cardiac disease, it behooves us to select the one which will also account for the systolic murmur and the gastrointestinal bleeding. This selection, of course, is based on the assumption that a unitary diagnosis in a patient of this age is more likely to be correct than multiple diagnoses.

DIFFERENTIAL DIAGNOSIS

"With these considerations in mind, let us proceed to rule out a number of pertinent etiologic possibilities (Table 1). Since coronary arteriosclerotic heart disease is statistically very frequent, the tendency to attribute unexplained heart disease in the older age group to coronary ischemia, despite the absence of the anginal syndrome or evidence of myocardial infarction, is almost irresistible. I have always tried to eschew such a popular diagnosis, if for no other reason than that it follows the path of least resistance and tends to encourage intellectual sloth.

"Moreover, my experience at this hospital in the past twelve years has led me to believe that uncomplicated coronary arteriosclerosis is an extremely rare cause of cardiac hypertrophy and insufficiency, especially in colored males. I can recall only one instance of painless coronary artery disease, producing cardiac hypertrophy and congestive heart failure, and this occurred in a 35-year-old white male. I do not wish to convey the impression that painless coronary disease is uncommon in the colored male, but when this has resulted in cardiac enlargement and cardiac insufficiency, in each instance there have been clinical episodes of myocardial infarction, demonstrable by the electrocardiogram.

"Thus, though I admit to an inability to exclude coronary artery disease in this case, I shall follow my customary intellectual hunch in cases of this sort and relegate it to the bottom of the list of possibilities. The systolic murmur and thrill can be explained on a coronary basis, if one assumes the presence of a septal mural thrombus at the site of a previous infarction, strategically situated below the aortic valve and large enough to produce partial obstruction at the aortic outlet. Another possibility is perforation of a septal infarction. Either of these explanations is rendered highly improbable in the absence of any history even remotely suggestive of acute myocardial infarction.

NO SEPTAL DEFECT

"While the presence of a systolic thrill at the lower left sternal border prompts the suspicion of an interventricular septal defect, possibly of congenital origin, the age of the patient, the absence of mention of any such murmur during the first admission, and the absence of pulmonary artery dilatation—which would almost certainly be present in a left-to-right shunt large enough to produce cardiac hypertrophy and congestive heart failure —leads me to an unhesitating rejection of this possibility.

ROLE OF MYOCARDITIS

"A third category of disease process which must be considered in this case is a chronic inflammation or myocarditis. While the role of myocarditis[1] as a cause of obscure heart disease has been revived by clinical and pathological experience during and since World War II, especially in association with a variety of infectious and allergic diseases, nevertheless idiopathic myocarditis—also referred to as isolated or Fiedler's myocarditis—is a 'rare bird.' I have personally never encountered a case proved at postmortem. It is characterized pathologically by inflammatory lesions limited to the myocardium, mainly interstitial in distribution, and clinically, in most recorded instances, by an acute course, generally terminating fatally in a few weeks. Occasionally, the

TABLE 1

DIFFERENTIAL DIAGNOSIS OF LESIONS WHICH COULD EXPLAIN MAIN CLINICAL FEATURES OF CASE UNDER DISCUSSION

Lesions Which Can Cause Obscure Cardiac Disease and Insufficiency	*How Lesion Might Produce a Systolic Murmur and Thrill at Lower Left Sternal Border*	*Can This Lesion Also Cause GI Bleeding?*
I. Atypical Coronary Arteriosclerosis	I. (a) Perforation of a septal infarction (b) Mural thrombus at site of septal infarct just below aortic valve, resulting in partial obstruction of aortic outflow tract	I. No
II. Congenital	II. Interventricular septal defect	II. No
III. Inflammatory: Idiopathic Myocarditis	III. No known mechanism	III. No
IV. Non-Inflammatory	IV.	IV.
A. Metabolic	A.	A.
1. Hemochromatosis	1. No known mechanism	1. Yes (esophageal varices)
2. Glycogenosis	2. No known mechanism	2. No
3. Primary Systemic Amyloidosis	3. Infiltration of valves with deformity resulting in stenosis or insufficiency	3. Yes (erosion and ulceration of mucosa, sometimes no demonstrable gross lesion)
B. Miscellaneous	B.	B.
1. Idiopathic Cardiac Hypertrophy	1. No known mechanism	1. No
2. Endocardial Fibro-elastosis	2. Valvular thickening and deformity	2. No

course is more chronic, lasting months or years. I know of no way of establishing a diagnosis of idiopathic myocarditis during life, short of myocardial biopsy. So, while I cannot exclude this possibility, I shall place this diagnosis low down on our list, even below that of atypical coronary disease.

GLYCOGENESIS

"Among noninflammatory lesions that may produce heart disease and congestive failure of obscure etiology are such metabolic curiosities as hemochromatosis and glycogenesis. The latter is essentially an infiltrative disease producing cardiomegaly in infants, leading to death in the early months of life. However, there are scattered reports of glycogen-storage disease[2] involving the hearts of adults. The cardiac type[3] of glycogen-storage disease shows no abnormality of carbohydrate metabolism, and, in addition to the myocardium, diffusely but variably involves other tissues, principally skeletal muscle, smooth muscle, reticulo-endothelial system, bone marrow, liver, kidney, and lymph nodes. It is currently regarded as unrelated to the classical type of von Gierke's disease in which there is an enzymatic effect of glycogen catabolism. Since the cardiac and ECG findings are nonspecific, the only way diagnosis can be established antemortem is by the chance demonstration of glycogen in a skeletal muscle, bone marrow or lymph node biopsy. Again, in the case under consideration, this disease entity can only be ruled out on the basis of its extreme rarity.

HEMOCHROMATOSIS

"Another but less rare metabolic disorder which may produce cardiomegaly and congestive heart failure is hemochromatosis.[4] I have seen one case of the disorder in this hospital. The diagnosis is suspected from the presence of concomitant diabetes mellitus and hepatomegaly, and the demonstration by liver biopsy of hemosiderin deposits. In this case, though we were not able to perform a liver biopsy prior to death, the absence of any suggestive clinical features of hemochromatosis leads me to exclude this diagnosis without qualms.

"Finally, among the metabolic disorders involving the heart, there is primary systemic amyloidosis, which by virtue of its relative frequency has come to occupy an increasingly important position in the differential diagnosis of obscure and puzzling disorders. As a consequence, this disease is a favorite topic of clinicopathological exercises such as this. Primary systemic amyloidosis[5] has a predilection for mesodermal tissue, infiltrating the heart muscles, skin, gingivae, blood vessels, and lymph nodes. Secondary amyloidosis, on the other hand, characteristically involves the parenchymatous structures such as liver, spleen, kidneys, adrenals, and thyroid, to mention only the oustandingly involved tissue. The amyloid in the primary form further differs from the secondary type in its aberrant staining characteristics.

"These morphologic distinctions between the two types are not reliable, since there is so much overlapping both in respect to staining and organ distribution; differentiation between primary and secondary amyloidosis should depend on the presence or absence of a known predisposing condition such as chronic infection, rheumatoid arthritis or multiple myeloma.

"Another distinction, that is clinically valid, is that cardiac enlargement and insufficiency occur only in the primary form. The amyloid deposits produce loss of ventricular distensibility with diastolic restriction, often resulting in clinical and hemodynamic features mimicking constrictive pericarditis.[6] As a result of valvular infiltration and deformity, valvular insufficiency or stenosis may result with attendant murmurs. Electrocardio-

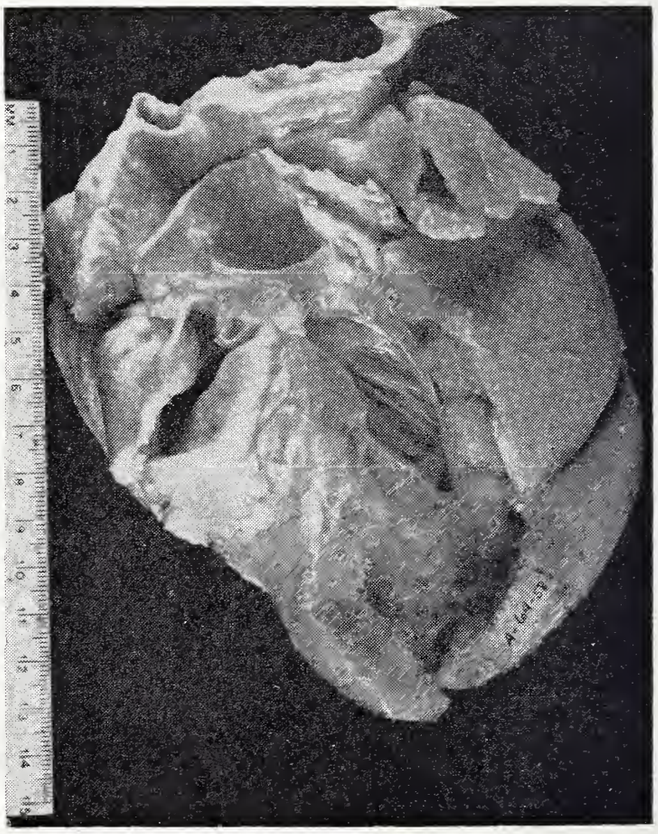

Figure 4. Hypertrophy and dilatation of heart, retaining its globular shape.

graphic findings[7] are essentially nonspecific, suggesting myocardial damage. The diagnosis in vivo depends upon the demonstration of the amyloid deposits in a biopsy of involved tissue. Of the five

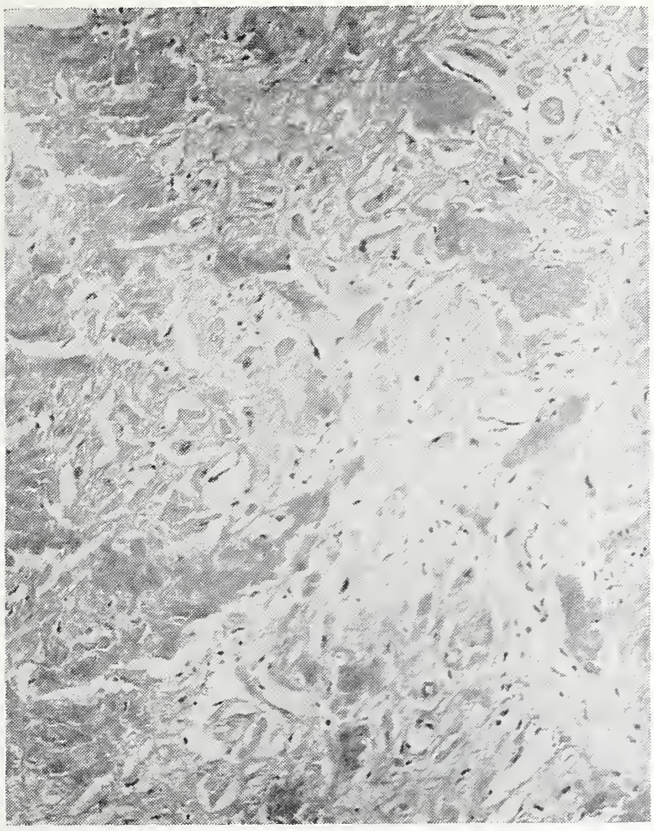

Figure 5. Heart muscle, showing diffuse infiltration with amyloid and resultant atrophy of muscle fibers. Congo red × 100.

diagnostic possibilities so far discussed, it seems to me that primary systemic amyloidosis must be given high priority.

"This discussion cannot be concluded without a consideration of two morphologic entities which have received considerable attention in the literature of the past several years. These are idiopathic cardiac hypertrophy and endocardial fibroelastosis. The latter disorder first appeared on the clinical scene over a decade ago as a cause of cardiac hypertrophy and failure in infants. In recent years endocardial fibroelastosis has been reported with increasing frequency in adult autopsies.[8] However, it is not clear whether this anatomic postmortem finding constitutes a clinical entity for it is not a disease that can be diagnosed by specific anatomic manifestations. It is found most frequently as a secondary nonspecific change in patients with other types of cardiac disease, such as advanced coronary arteriosclerosis and myocardial infarction. It is considered by many pathologists as representing a nonspecific response to anoxia, infection or abnormal intracardiac pressure relationships.

PROTOCOL SUMMARY

"Interestingly enough, a significant degree of endocardial fibro-elastosis is common in that mysterious clinical entity, idiopathic cardiac hypertrophy, which, as its name implies, signifies that we know nothing of its pathogenesis, and that the only significant finding at postmortem is ventricular hypertrophy and dilatation, associated with such nonspecific gross findings as mural thrombi, and, histologically, a variable degree of necrosis and interstitial fibrosis.[9] I have seen a fair number of such cases at this hospital over the past 12 years, and it is my impression that it is the commonest cause of obscure heart disease in middle-aged colored males admitted to the Medical Service of this hospital. Cardiac arrhythmias and thrombo-embolic phenomena are not uncommon in both endocardial fibro-elastosis and idiopathic cardiac hypertrophy but significant murmurs are usually lacking.

"It should be evident from all this involved and peripatetic discussion that an unequivocal diagnosis cannot be arrived at in this case. However, there is one clinical feature which I feel holds the key to the diagnosis: I refer to the gastrointestinal hemorrhage. Of all the diagnostic possibilities mentioned, there are only two which can account for this symptom: (1) hemochromatosis, discarded on clinical grounds, and (2) primary systemic amyloidosis. This is the only disease process which can account for the cardiac enlargement, the systolic murmur, and the gastrointestinal bleeding. Primary systemic amyloidosis is, therefore, my first choice. As a second choice, in view of the experience at this hospital, I would pick idiopathic cardiac hypertrophy as the lesion producing the congestive heart failure and an unrelated disease process of the bowel (probably neoplastic) to account for the gastrointestinal bleeding."

PATHOLOGICAL DISCUSSION

Dr. Ferrington: "Gross findings at postmortem disclosed a well-developed but poorly nourished colored male body. There was moderate cyanosis of lips and fingertips. Pleural cavities were free from fluid. Pericardial sac contained the normal amount of slightly cloudy fluid. Pleural adhesions extended bilaterally from the posterior aspect of each lung to the chest wall. The upper and lower lobes of each lung showed marginal emphysematous bullae.

"The heart presented a striking appearance (Fig. 4). It was almost twice the normal size and weighed 625 gm. There was a concentric type of hypertrophy. There was marked dilatation of all chambers. The myocardium on cut surface was extremely pale. Its appearance was waxy, homogenous and translucent. Its consistency was firm. Upon opening the heart, the chambers did not collapse but retained their globular shape. The coronary system showed minimal arteriosclerotic changes. There was a Grade IV arteriosclerosis of the thoracic and abdominal aorta.

ABDOMINAL CAVITY

"The abdominal cavity was free from fluid and adhesions. Essential gross abnormalities of the abdominal viscera were absent. The gastrointestinal tract was carefully examined from the esophagus to the anus without yielding any evidence of free blood or gross changes which could have constituted the cause for rectal bleeding. The liver weighed 1,550 gm. The edges were sharp. On cut section the architecture was pronounced. The gallbladder contained 50 cc. of dark, inspissated bile. The spleen weighed 100 gm. Its consistency was firm, the capsule wrinkled and adherent to the posterior abdominal wall by dense fibrous adhesions. The pancreas was well lobulated on cut surfaces. The kidneys weighed each 130 gm. The capsules stripped with difficulties, leaving a coarsely granular surface. On cut surface the cortex was narrowed to 2 mm. and sharply separated from the pyramids. No essential abnormalities of the urinary bladder. The prostate gland was moderately enlarged, smooth, firm, but not hard.

MICROSCOPIC FINDINGS

"Microscopically, the most significant findings were noticeable in the myocardium and observed throughout all sections obtained from the walls of atria and ventricles alike (Fig. 5). There was a diffuse, haphazard infiltration by masses of a homogeneous, amorphous, hyaline-like material, which compressed surrounding myocardial fibers. The latter showed swelling of its nuclei and a severe degree of sarcoplasmic vacuolization with progression to focal necrosis. In addition, deposits of the same material were seen within the walls of small arteries and arterioles.

"The pericardium was considerably thickened due to dense, fibrous connective tissue and moderately infiltrated with chronic inflammatory cells. The walls of small vessels displayed deposits with the same type of material as described for the myocardium. The same vascular changes were noticed frequently within walls of small vessels of the mesentery and rather sparingly within the same size vessels of lung and liver (Fig. 6). Liver, spleen, and kidneys gave evidence of chronic passive congestion. There was an advanced nephrosclerosis of the senile type and a moderate benign hypertrophy of the prostate gland.

"Staining reactions of the above-described deposit yielded a pale pink color with hematoxylin-eosin, a salmon pink with Congo-red. It manifested strong metachromasia with crystal-violet. The periodic-acid-Schiff (PAS) reaction was positive. Consequently, we are dealing here with an abnormal protein complex known as amyloid. Its chemical nature up-to-date has not been entirely analyzed. Vazquez and Dixon,[10] using fluorescent antibody techniques and chemical analysis respectively, believe that globulin is an important component of amyloid and suggest the possibility that this substance represents an antigen-antibody precipitate. Braunstein and Burger[11] made a study of five different varieties of amyloid on the basis of staining and histochemical reactions

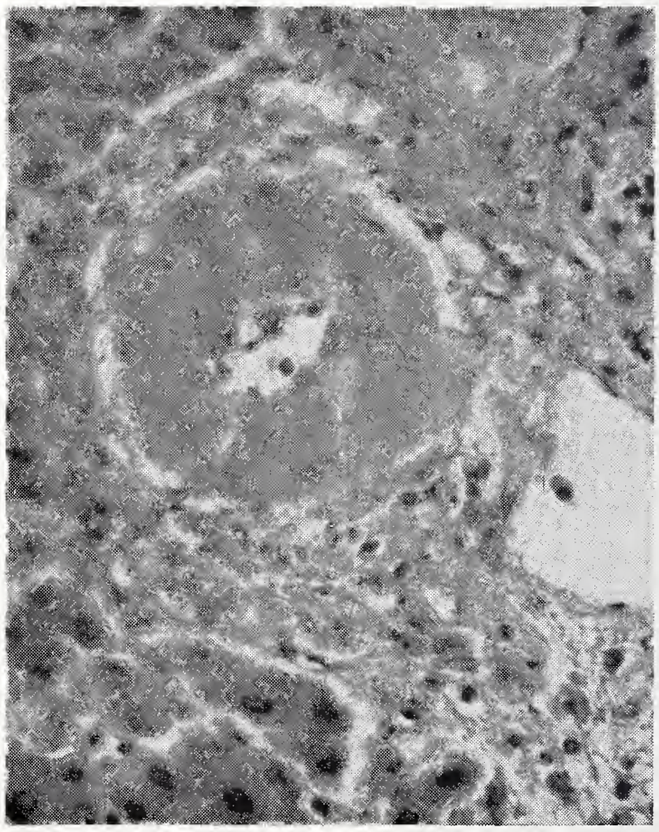

Figure 6. Arteriole (liver), showing amyloid infiltration of the media. H & E × 200.

and feel that data secured in their study appear to constitute evidence against this hypothesis. They identified three components: protein, carbohydrate (or glycoprotein), and acid mucopolysaccharide. The PAS-positive component is glycoprotein, while acid mucopolysaccharide yields metachromasia with crystal-violet.

AMYLOIDOSIS

"Amyloidosis is considered a degenerative process. A fundamental feature of amyloid degeneration is the tendency of this substance to be laid down not within cells, but within the intercellular tissues. Thus, it damages the parenchyma in two essential ways: (1) by means of compression it causes atrophy and necrosis of adjacent parenchymal cells, and (2) by means of reducing blood supply, if deposited within vessel walls, it narrows their lumina. Nutrition is decreased and death (infarction) results.

"Amyloidosis is usually classified as:

"1. Primary amyloidosis, which in turn is subdivided into: (a) Primary (atypical), localized amyloidosis of the heart, in which amyloid deposition is confined to the heart with little or no involvement of other organs. (b) Primary systemic amyloidosis, in which amyloid deposition of the heart is part of a generalized involvement of striated and smooth muscle and connective tissue.

"2. Secondary (typical) amyloidosis, following long-standing diseases of suppuration, in which the characteristic involvement of liver, spleen, kidneys, and adrenals is occasionally associated with amyloid deposition in the heart.

"3. Amyloidosis, associated with multiple myeloma.

"4. Tumor-forming amyloidosis."

CORRELATION

"The case discussed today represents the primary systemic type with predominant involvement of the heart and lesser involvement of the vascular system of mesentery, lung and liver. Any history of specific etiological factors, such as tuberculosis or of a long-standing suppurative disease is absent. Onset of the patient's illness apparently dates back about three years (fall 1955). At the time of his first admission, he complained of 'muscular weakness and weight loss' starting at about that period. Tarry stools and bleeding per rectum four months prior to his second admission most certainly were due to intestinal mucosal infarcts, following occlusion of nutrient mesenteric vessels involved by amyloidosis. Ventricular fibrillation of an enormously dilated heart is considered the final cause of death."

SUMMARY

A case of primary systemic amyloidosis has been presented. The final pathological diagnoses were:

1. Primary systemic amyloidosis
2. Cardiac hypertrophy and dilatation (severe); chronic pericarditis
3. Chronic passive visceral congestion (liver, spleen, lung)
4. Pulmonary arteriolarsclerosis
5. Grade IV aortic atherosclerosis
6. Atherosclerotic nephrosclerosis (senile type)
7. Chronic pulmonary emphysema and focal atelectasis
8. Chronic adhesive pleuritis, bilateral
9. Atrophy of spleen; chronic adhesive perisplenitis
10. Prostatic hypertrophy, benign. ★★★

Lindbergh Drive

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Sixty-four per cent of all physicians are less than 50 years of age. The largest age group is 30-34 which contains 15.1 per cent of the nation's doctors. Five and four-tenths per cent of all physicians are 75 or over.

The Advantages of Private Medical Care

JANE BROWN
Gulfport, Mississippi

Miss Brown, Gulfport High School senior, won first place in state competition and 12th place in the national 1960 AAPS contest with this essay. She defends private medical care on the ground of the personal relationship, impossible under socialized medicine, the past health record of the United States, and the quality produced by competition, among others. Miss Brown writes, "The government should be supported by the people, not the people by the government." She concludes, "Control by the government . . . in industry, business, or medicine is an insidious threat to our freedom that we call the American Way."

THE UNITED STATES OF AMERICA was founded on the principles of free enterprise and individual initiative. Today our free way of life is being threatened by governmental control in various fields, including medicine. The system of private medical care under which we now operate has deep-rooted advantages, which are characteristic of the American way—"liberty and justice for all."

It would be difficult to overemphasize the importance of the close, personal relationship between the doctor and his patient. Under private medical care a person does not feel as though he is just another number in the files, an appointment to be met, a case to be reckoned with because he has chosen his own doctor on the basis of reputation and personal qualifications. The doctor, on the other hand, feels he owes the patient his best, since the patient, if dissatisfied, is likely to go elsewhere. Too, it is a satisfaction to the patient's family to know that the doctor is not serving just as a doctor, but as a friend, sympathetic and interested in the case, not merely carrying out orders. A lady whom I know thought she was having a heart attack, but when the doctor arrived he diagnosed her case as simply heartburn. Nevertheless, because she was frightened he stayed with her for nearly two hours. Where else except in a free land as ours could a doctor perform such a personal and time-consuming service? It is on the basis of mutual trust and cooperation between the patient and the doctor that the recovery of good health largely depends.

A look at the health record of the United States will give us an accurate picture of the progress made under our system of private medical care. Although cancer and heart trouble are still on the loose, other diseases that once ravaged the country have been brought under control or annihilated through study and research. Some of these convicted killers brought to justice by painstaking experimentation and investigation are typhoid fever, small pox, pneumonia, and diptheria. Wonder drugs, called antibiotics, sulfa drugs, and hormones, have been developed. Delicate operations have been successfully performed by skilled surgeons on all vital organs, including the heart, lungs, brain, stomach, and eye. These are the facts—let them speak for themselves.

One of the main arguments against the private practice of medicine is that the doctor is free to charge any sum he pleases for his services. Although this is true, as it is with other professionals such as lawyers, accountants, and architects, a doctor is governed by the prices of other doctors, and in order to maintain his practice he must not overcharge. Still, I'm on my soapbox to say that I believe a doctor deserves every penny he earns, for he is truly a slave, subject to the call of duty twenty-four hours of the day. The family of a doctor also deserves some compensation for being minus a husband and father. Of course, there are

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First prize winner in 1960 state high school essay contest sponsored by the Association of American Physicians and Surgeons. Twelfth place winner in the national competition.

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exceptions, but I am confident it can be agreed that doctors make poor husbands, fathers, party-goers, and friends because they are so devoted to their work that there is little time left for personal relationships. Why shouldn't a doctor receive good pay in return for his sacrifice of time and energy and life itself? The very fact that medical care does cost money prevents people from bringing every trivial ailment to the attention of their physicians. Under government controlled medicine, this is one of the main problems because it is a known truth that people will accept all they can get for nothing. If all the food in the grocery stores were free and financed by the government, don't you imagine there would be a lot af full cabinets and refrigerators in America?

THE RED TAPE OF SOCIALISM

Because our physicians are not regimented by the government, they are freed from the paper work and red tape which socialized medicine requires. In England, where medicine has been socialized since 1948, doctors complain of having, literally, writer's cramp. They have to keep detailed records on each person in their "group," and must sign certificates in order that the patient may buy such articles as thermos bottles, eye glasses, hearing aids, and extra food. Also they must sign checks for cash sickness benefits and travel allowances. A prescription may not be refilled; the doctor must write out another one. So, along with his difficult duties as a saver of lives, a doctor is compelled to become a bookkeeper as well.

PATIENT COMES FIRST

A private physician studies a case from every aspect before he makes his diagnosis because, in addition to his sense of duty, he knows his reputation and the confidence of his patient are at stake. After careful diagnosis he will prescribe accordingly. Under government-controlled medicine, the emphasis is placed, not on the diagnosis, but on the cure. A doctor, loaded down with paper work, certificates to be signed, and hundreds of patients bothering him with everything from smoker's cough to mosquito bites, would not have time anyway to diagnose a case of real importance. Even if he were mistaken in his diagnosis, he would still retain his position and his "assigned" patient; that is, if the patient were still alive after being administered drugs for a sickness he didn't have.

Competition in medicine, just as in any other area, makes for better service. Our country has been built on competition, and its worth today is real as it was one hundred years ago. Because a doctor knows his particular service is not compulsory, he will bring into play personal drive, courage, and hard work, and at the same time he will grow in dedicated service to God and man. Competition is the drive that keeps men on their toes.

QUANTITY OF CARE

Just as the quality of medicine is improved by competition, so is the quantity—that is, the number of men who enter the medical profession. Recently, a noted member of the American Medical Association who spoke at a luncheon in New Orleans stated that the number of young men studying to be doctors was on the decline. The reasons he gave for this downward trend were long years of study, expense of college, and the impending threat of socialized medicine. Those interested in studying medicine realize the intense responsibilities and duties of a doctor, and they cannot be blamed for hesitating to take the long road of study required with possible regimentation and standardization of the profession as a reward. It is because there is a chance to excell and gain personal recognition that a doctor works his hardest, but when each doctor is on the same level and rewarded equally, regardless of his effort, the quality as well as the quantity of medical care deteriorates. Too, it is unreasonable to expect young men to study years and years acquiring a costly education, when they could be removed by a board and not ever allowed to practice again with no explanation necessary. The practice of medicine would cease to be a profession; it would become a mere job. No, the doctor shortage could not be corrected by socialized medicine. Unless, of course, the government plans to "draft" doctors.

PRIVATE CARE: PRIVACY

Personal privacy is one of the major advantages of private medical care. It would be a violation of personal dignity to have government files containing the health records of individuals. Such public records would prove to be embarrassing to some, and they might even prefer death with privacy, to a display of their ailments in a government report.

Our present medical system does not tax the general public or burden the government. It is reported that England's economy has teetered dangerously since she undertook the tremendous project of controlling medical care. It would be impossible to predict accurately a set payment for a compulsory health program because the sum

would likely increase steadily and endanger the economy as it has done in other countries where it has been employed. Besides, the government should be supported by the people, not the people by the government. Once government ownership gets its foot in the door, all free enterprise is in peril and democracy is on the way out.

It is highly improbable that very many people are dying each year because they lack the funds with which to finance medical attention. A large part of America's population, veterans and service people, are already provided with medical care at government expense. Other segments which might need financial aid or free medical care may obtain it from a charity hospital, the county health center or the state welfare department. It is difficult to believe that in this country of plenty and common brotherhood, thousands, as reports allege, are allowed to walk despairingly into the jaws of death because they did not have the money to pay for hospitalization, drugs, and the care of a physician. This country is not negligent of its responsibility to the indigent, to the handicapped, and to other members of society who cannot help themselves.

The United States was built on the spirit of independence, initiative, and industry. We believe in the principle of freedom because we believe in the dignity and worth of the individual man. Control by the government, however, takes away the privilege of independence, initiative, and work from the individual, and such intrusions into any area of life, be it in industry, in business, or in medicine, is an insidious threat to our freedom that we call the American way. Yes, the price of liberty is eternal vigilance. Let us all—young and old alike—alert ourselves and declare, "It won't happen here!" ★★★

14 Poplar Circle

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OF BAR RAILS AND BACKACHES

Got a backache? Get a bar rail, says Dr. M. Lawrens Rowe of Rochester, N. Y. According to the *Insider's Newsletter,* Dr. Rowe states that resting a foot on a low railing reduces hyperextension. He recommends a bar rail for every home—under the kitchen sink, in front of the ironing board or any other work space where housewives must stand for long periods. All of which leads us to believe that old-time saloon owners knew what they were doing when they invested in a sturdy brass bar rail. (Postscriptum: Dr. Rowe doesn't say whether the home model bar rail works better with or without the bar.)

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EDITORIALS

Play Ball—Safely

I

In less than two months, America will witness its annual fever-pitch climax in team sports. The World's Series will temporarily displace the presidential campaign as number one news item and the shrill chatter of the referee's whistle will kick off the 1960 football season as millions flock to the gridirons. For physicians, this season has a two-fold meaning: Like other Americans, they share the excitement and pleasure of team competition but as scientists dedicated to the conservation of human health, they are concerned with the physical well-being of the competitors.

This year and every year, millions of youngsters will participate in competitive team sports and some will be unmindful of the hazards involved. The physical safety record of organized, supervised athletic competition is remarkably good. Not only must it be maintained as such, it should be improved. The Committee on Injury in Sports of the American Medical Association sums it up this way:

"Well-organized athletic programs help to teach young people moral and spiritual values, provide wholesome recreation, build vigor, and improve skill, strength, agility, and endurance. Athletics also provide an excellent means of teaching the values of competition and cooperation. In addition, they can help players learn how to win gracefully and to retain their poise in defeat. But the desire to win must never be allowed to take the fun out of athletics nor cause neglect of the basic safeguards to health.

"Winning is a legitimate goal in any sport. However, parents, coaches, school administrators, and physicians have a joint responsibility to see that games are not won at the expense of the health of the players."

II

Most sports injuries are minor in nature. As a consequence, there are no reliable data on the number or classification of these injuries which, in the main, are sprains, contusions, and fractures. But serious and even fatal injury can result from sports competition. Usually, these tragic occurrences are confined to body-contact competition such as football, basketball, hockey, and boxing. To a lesser degree, baseball and track take a toll among competitors.

The more professional the sport, the lower the rate of injury mortality. Dr. Floyd R. Eastwood, chairman of the Committee on Injuries and Fatalities of the American Football Coaches Association, states that there were 108 deaths attributable to football in the United States during 1955-59. Of this total, 81 deaths were classified as direct, resulting from injuries sustained while playing. The remaining 27 fatalities were reported as indirect, caused by heat prostration, cardiovascular involvement, and other conditions.

High school football accounted for 51 deaths in the direct category while college players sustained only seven such fatal injuries. Statistically, these are low mortality rates. Among high school players, it is only 1.7 per 100,000, quite small when compared to other youth activities mortality and the rate is being lowered. The National Football League with about 400 players had no fatalities during the five-year period. Similarly, mortality hazard in major league baseball is small, there being no fatal injury in the National or American leagues since 1920.

Boxing accounted for 18 fatal mishaps during 1955-59 among which were 12 deaths in amateur competition and six in the professional ranks, according to *The Ring* magazine. Most occurred during actual bouts and few, if any, significant injuries resulted from sparring during training. Occasional fatal injury was noted in basketball, skiing, and ice hockey but data are lacking in these connections.

III

At community level, physicians can and are contributing substantially to safer sports competition, especially among high school athletes. Many component medical societies guarantee the services of a physician during team competition and in many areas, preseason medical examination for general fitness and health is a routine prerequisite to athletic eligibility. These are sensible, initial steps in building programs of injury prevention through which the values of organized sports may be realized.

In safe, successful team athletic programs, there is usually a four-way sharing of responsibility. The athlete's *parents* are responsible for his health and fitness to participate. Further, they are accountable for cooperation with school authorities and physicians. The school *administrator* is responsible for ascertaining that the athletic program conforms to the general purposes of education, for cooperating with local physicians, and for providing maximum protection for the sports participants.

The *coach* has the job of proper supervision of the sports and of demanding high standards of sportsmanship, adherence to health standards recommended by the team physician, recognizing injury, and referring decisions as to a player's physical ability to the team physician. The team *physician* should determine health and fitness eligibility of each player, assure his own availability at game time, and advise the coach and athlete's parents in all sports-related health and injury matters.

IV

The logical thesis of sports safety is continuing medical supervision. The American Medical Association recommends joint planning among school authorities, physicians, representatives of parents, and coaching staffs to assure safe, healthful, and beneficial athletic competition. Protective procedures for players should include preseason medical examination, determination for health and fitness eligibility by periodic medical observation, recognition and referral of injuries for immediate care, and appropriate arrangements for emergency care in event of injury.

Look for the doctor of medicine at the game. He's as partisan as anyone in behalf of the home team. He has a whopping share of school spirit and lets everyone know it, too. He wants the youngsters to win—not just the game but the character-building values of competitive sports as well. And he'll do his share to help achieve these goals safely.—R. B. K.

Preventive Medicine

It is now obvious that we have lost another battle to the forces of socialism. Regardless of whether the Forand, administration, or Mills Bill is passed, an element of federalism shall have been injected between the over-65 patient and his physician. And this includes everybody, not just the doctors. We have sacrificed another segment of our previously free society which we probably will never recapture.

It would be a mistake to include only the doctors as the only losses because any time government assumes a responsibility that basically belongs to the individual, everyone must share his part of the loss. Without a doubt, we weaken ourselves as a nation by giving up our liberties to a centralized power. It is discouraging, to say the least, to see our heritage gradually eroded by politicians possessed of few scruples who stoop to the easiest method of gaining favor, that of giving away something—something that is not theirs to give in the first place.

There is probably one significant lesson to learn from recent trends in our governmental attitudes and policies. It is not easy to admit, nor does it do anything for our ego, but it is simple in context. The people of this country will always get what they need or think they need, even if principle has to be sacrificed. And this is the danger because as one relinquishes one ideal after another, we gradually find ourselves stripped of

ideals, so that there is no longer anything to lose.

In this writer's opinion, medicine's greatest fault lies in its inability to anticipate the demands of the people far enough ahead of time to effectively remove these demands from those political opportunists who do not fully understand them. It seems that we are always on the defensive. Antidotes are discovered only after the epidemic has taken its toll of lives. This appraisal of one of our most outstanding characteristics is not very flattering, but ignoring it will not make it go away. And to ignore it will only permit it to continue to work against us and against the principles of a free society.

Our nation is currently enjoying the greatest prosperity of modern times. Why then, in this land of plenty, must we increase our welfare program? We need to consider each segment of our population that has or will have a medical need. We need to establish etiological and epidemiological surveys pertaining to this aspect of medicine patterned after the same disciplined efforts applied to diseases and scourges. Surely these liberty-seizing trends are symptoms of a dangerously sick community.—T. J. M.

'Don't Annoy the Monkeys!'

Every doctor of medicine knows that many scientific heroes walk on four feet. Without experimental animals, there might be no corticosteroids, cardiovascular surgery, or even antibiotics in this missile age. Although no responsible research institution mistreats animal subjects or submits them to unnecessary discomfort, the anti-vivisectionists have consistently carried out their campaigns against such research with vigor and dedication. Theirs is an emotional approach largely devoid of scientific consideration as to necessity and benefits produced.

Ten years ago it looked as though anti-vivisection was going out of style. The socially prominent patrons of the movement were dying out and the public had become aware of the urgency for more and better medical research. Now, there are signs that an anti-vivisection resurgence is in the making and it's something over which to express concern. Supply of experimental animals has been lopped off in California, Connecticut, and Florida, mostly through anti-vivisection campaigns. In California, Stanford University and the College of Medical Evangelists were formally charged with cruelty to experimental animals under a state law which could deny licensure to conduct further research by this method. Charges against the College of Medical Evangelists were dismissed but Stanford is still in hot water.

The Ladies' Home Journal, a second string women's magazine, recently featured an article by Dorothy Thompson echoing the anti-vivisectionists' tired, weary palaver against laboratory use of animals in research. Most alarming of all is a bill before the U. S. Senate, S. 3570, by such luminaries as Mansfield, Kefauver, Proxmire, Gruening, McNamara, and Church, which would have the federal government breathing down the investigator's neck if experimental animals were utilized.

Nobody—not even the most militant anti-vivisectionist—can discount the pragmatic value of medical research. Few are so naive to contend that senseless limitations be placed upon institutions and investigators equipped to conduct research but the anti-vivisectionists do with their new drive for state and federal laws. Anyone with a grain of common sense knows that each experimental animal must receive the best possible care if the experiment is to produce any concrete results. As a matter of fact, most such animals receive as good care and attention as human patients. But try and convince the anti-vivisectionists of this.

Progress is being realized in enlarging supply sources for cadavers and transplant materials. The National Conference on the Legal Environment of Medical Science is making progress in analyzing laws affecting medical research. There must be no regression in this climate of progress and, indeed, there should be an acceleration toward new optimums in medical research environment. Not the least among these is the use of experimental animals by responsible institutions in the quest for life itself.—R. B. K.

Smokers: Be Aware

The habit of smoking has always had an aura of danger associated with it. This cloud of suspicion has existed for as long as mankind has utilized tobacco and other smokable herbs and roots, and general concern regarding this has been at various times more with us and less with us.

Today we are again at the crest of the wave insofar as popular awareness of this problem is concerned. There are convincing statistics on smoking and cancer. There is strong experimental and clinical evidence of the adverse effects of smoking on the cardiovascular system. The connection between smoking and peptic ulcer appears to grow more obvious all the time.

Paradoxically, in the light of all this evidence cigarette sales continue to soar higher each year and Americans have the dubious distinction of being the world champion smokers.

Recently, another harmful physiologic effect of smoking has been suggested. C. W. Heath (Difference Between Smokers and Non-smokers, AMA Arch. Int. Med. 101:377 (Feb.) 1958) writes that cigarettes have a hypoglycemic effect. He maintains that personality patterns of smokers and nonsmokers show contrasting characteristics. The smokers show greater energy, restlessness, activity, and are often the more labile type of individual, says Heath.

This same type of person is the patient who will have the functional hypoglycemia, the dumping syndrome after gastrectomy, or the vague symptom of nervousness, dizziness, fatigue, headache, and similar intangible signs with no definite etiology. Many of these patients are heavy smokers, and Heath believes this to be more than coincidence. In his studies, glucose tolerance curves revealed a definite degree of hypoglycemia in many of these patients, with blood-sugar levels falling as low as 22 mg. per cent. P. T. Bohan and M. G. Berry (Hypoglycemia and the Use of Tobacco, GP 8:63 (Nov.) 1953) report a series of 38 patients in whom these studies were carried out. Thirty-five of the 38 stopped smoking, resulting in a disappearance of symptoms within the first month. Some resumed smoking and experienced a recurrence of symptoms which were relieved when they again stopped smoking.

In a later study of 24 patients (Berry, M. G.: Tobacco Hypoglycemia, Am. Int. Med. 50:1149 (May) 1959) in whom hypoglycemia was produced by cigarette smoking the following criteria were met: (1) use of one or more packs of cigarettes daily, (2) symptoms compatible with the diagnosis of hypoglycemia, (3) blood sugar levels below 55 mg. per cent concurrent with symptoms of hypoglycemia, (4) prompt relief by the ingestion or administration of glucose at the time symptoms occurred, (5) complete and permanent relief of symptoms with cessation of smoking.

There are other interesting aspects about this particular effect of smoking, some of which were noted in the American literature as far back as 1931. Nicotine has undisputed effect on normal physiology pertaining to adrenal function which is closely connected to this abnormal response to smoking.

So as we "light up" while we dwell on the implications and possibilities of cigarette smoking, we can now include in the macabre list of diseases and results of smoking, the abnormal blood-sugar levels which can produce physical discomfort, and also personality changes in our patient. —T. J. M.

PERSONALS

Frank Acree, Greenville, was named medical representative of the Washington County Heart Council at the Council's annual business meeting in June. Bronze medallions for meritorious service were presented to Drs. Acree and John G. Archer, Greenville.

Robert M. Akin, Hazlehurst, has announced the association of James R. Stingily and David L. Clippinger in the practice of medicine and surgery. Dr. Stingily has just completed his internship at the Mississippi Baptist Hospital. Dr. Clippinger comes from an internship at the Memorial Hospital, Savannah, Georgia.

Jim Barnett, Brookhaven, will serve during this year as chairman of the health and safety committee for the Tall Pine District, Boy Scouts of America. The appointment was announced by J. L. McLain, Tylertown, chairman of the Tall Pine District committee on scouting. Eric P. Robbins, Brookhaven, was named to the regional-sectional medical staff for the National Scout Jamboree in July.

A. V. Beacham, Magnolia, was named president of the Mississippi Association of Hospital Governing Boards, during the recent hospital association convention in Biloxi. Dr. Beacham was also made a director of the Mississippi Hospital Association and a member of the board of Mississippi Hospital and Medical Service (Blue Cross-Blue Shield).

Charles C. Brock, Jr., Tutwiler, has entered residency at the VA Hospital in Memphis.

Gussie R. H. Carr, Jackson, has entered a residency at the University of Mississippi School of Medicine.

E. K. Guinn, Okolona, has been named third vice president of the Okolona Lions Club. Joe H. Shoemaker was named to the board of directors.

Clyde X. Copeland, Jr., Jackson, a 1959 graduate of the University of Mississippi School of Medicine, has entered residency at the J. Hillis Miller Memorial Hospital in Gainesville, Florida.

John T. Copeland, Jr., Starkville, and Alton B. Cobb, Jackson, have completed out-of-state training and entered practice status.

Denvil F. Crowe, Booneville, has been appointed head of the radiology department of Northeast Mississippi Hospital. The appointment was made by the hospital's Board of Trustees.

Clifton B. Davis, Batesville, entered practice on July 1 with Deck Stone in the Stone Clinic. Following his graduation from the University of Mississippi School of Medicine in 1959, Dr. Davis served his internship at Chatham County Memorial Hospital in Savannah.

L. Stacy Davidson, Jr. opened a practice of general medicine in Cleveland last month. Dr. Davidson received his MD degree from the University of Mississippi School of Medicine in 1957, interned at Jefferson Davis Hospital, Houston, Texas, and has been in the service for the past two years.

Heber C. Ethridge, Jackson, has announced the opening of his office in association with James H. Hendrix, Jackson, in the practice of plastic and reconstructive surgery.

James V. Ferguson, Jr., West Point, has completed his out-of-state training and is now associated with T. N. Braddock, West Point, in the general practice of medicine.

R. B. Flowers, West Point, chief of the staff at Ivy Memorial Hospital, has been elected to membership in the American Society of Abdominal Surgeons.

J. Campbell Gilliland, Jackson, has completed his out-of-state training and has opened a pediatric practice in Jackson.

Robert M. Graham has returned from out-of-state training and opened practice in Gulfport.

F. C. Grieshaber, Biloxi, is now associated with A. G. Flynn in the practice of dermatology.

Arthur Clifton Guyton, Jackson, was featured as the "Pride of Northside" by the (Jackson) *Northside Reporter*. Said the *Reporter*, "Dr. Guyton is a man that is known not only nationally for his achievements, but internationally."

Roy F. Harmon, Houston, recently completed his internship in Memphis and has opened practice in his hometown of Houston.

Marvin V. Harvey, Mississippi State Hospital at Whitfield, has entered residency at the Baptist Hospital, Memphis.

Charles F. Hoffman, Gulfport, has received a fellowship in the American College of Chest Physicians.

W. B. Howard, Pontotoc, has been elected president of the Pontotoc Junior Chamber of Commerce.

Robert D. Kirk, Jr., Tupelo, has returned from military service and entered the practice of general surgery with L. C. Feemster and Ross B. Love.

James G. Krestensen, Washington, has entered residency at the University of Mississippi School of Medicine.

James W. Jackson, Aberdeen, won a medical bag for giving the correct diagnosis of a case presented in GP. This was Dr. Jackson's first entry in the contest.

George T. Kimbrough has completed his pediatric residency at the University of Mississippi School of Medicine and is now associated with Charles R. Gillespie in The Children's Clinic, Laurel.

James H. Leigh, Philadelphia, has been named chairman of the medical staff of Neshoba County Hospital. Other officers are Pete Rhymes, vice chairman, and Charles Moore, secretary.

Bob McKee has completed his internship in Tampa, Florida, and is now practicing in Oakland.

Robert L. McKinley, Bay St. Louis, has been elected chairman of the Hancock County Blood Bank.

Patrick G. McLain is now associated with Edley H. Jones in Vicksburg.

J. M. Mobley, Hazlehurst, has entered a residency in anesthesiology at Duke University, Durham, North Carolina. He has been associated with R. M. Akin in the practice of medicine.

John R. Montgomery, Jackson, is now a resident at Baylor University, Houston, Texas.

Daniel H. Moore, Jr., Jackson, has entered residency at the Cincinnati General Hospital, Cincinnati, Ohio.

William S. Moore has assumed operation of The Funderburk and Henley Clinic at Olive Branch. The Clinic was formerly operated by the late D. C. Funderburk and Walter H. Henley. Dr. Henley is giving up his practice to become a resident in surgery at Kennedy Veterans Hospital in Memphis. Dr. Moore received his MD degree from the University of Tennessee Medical School in Memphis and interned at the University of

Tennessee Research Center and at Memorial Hospital, Knoxville.

EUGENE M. MURPHEY has been named medical representative of the Lee County Heart Council. He was presented a bronze medallion in recognition of his outstanding services to the Heart Association at the June council meeting.

BRANTLEY B. PACE, Monticello, has completed out-of-state training and entered practice status.

LUTHER T. PENNINGTON has opened a practice of urology in Meridian. He just completed one year of special training in genito-urinary pathology at the University of North Carolina and at the Armed Forces Institute of Pathology, Walter Reed Army Medical Center, Washington, D. C.

WILLIAM H. ROSENBLATT, Jackson, will serve as vice-chairman of the Hinds County Heart Council for the coming year. He was chairman of the Council for 1959-60. During the recent annual meeting in Jackson, Dr. Rosenblatt was awarded a bronze medallion for outstanding service to the Heart Association.

KELLY S. SEGARS, Iuka, has returned from out-of-state training and entered practice status.

VAN C. TEMPLE, Hattiesburg, will represent Mississippi as national committeeman at the 1960 GOP convention. He was elected at the state GOP convention in June. Noel Womack, Jackson, was named one of eight presidential electors.

ROBERT C. TIBBS, Walnut, has taken over his duties as superintendent of the Natchez Charity Hospital. He received his degree in medicine at the University of Tennessee, Memphis, and interned at the Memphis Methodist Hospital. For the past two years he has been engaged in general practice in Walnut.

WILLIAM B. TUMLINSON has announced the opening of his office for general practice in association with J. Walton Lipscomb in Jackson.

W. W. WALLEY, Waynesboro, has been appointed president of the Wayne County Chapter of the American Cancer Society. He succeeds L. B. Merriam, who has returned to active duty with the United States Army Medical Corps.

STENNIS DAVIS WAX, Starkville, has been elected director of the Monroe and Lowndes County Health Departments. He succeeds Dr. C. H. Love.

NEW MEMBERS

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

BELL, CHARLES ELBERT, Eupora. Born Marks, Mississippi, December 9, 1929; M.D., University of Mississippi, Jackson, 1958; interned City of Memphis Hospitals, Memphis, Tennessee; U. S. Air Force, two years; elected June 14, 1960, by North Central District Medical Society.

HARRISON, DURWARD LAMAR, JR., Calhoun City. Born Forest, Mississippi, August 20, 1932; M.D., University of Tennessee, Memphis, 1956; interned Research Center, University of Tennessee Memorial Hospital, Knoxville; elected June 7, 1960, by Northeast Mississippi Medical Society.

DEATHS

MCMILLAN, MOSE MCCARLEY, Guntown. M.D., University of Nashville, Tennessee; practiced in Baldwyn, Rosedale, Tupelo, and Guntown for a total of 45 years; retired from active practice in 1934; emeritus member of MSMA; member of Fifty-Year Club; died at Caldwell Memorial Hospital, Baldwyn, June 17, 1960, aged 83.

O'CAIN, EDWARD CLANTON, Winona; M.D., University of Tennessee, Memphis; interned John Gaston Hospital, Memphis, and St. Joseph's Hospital, Memphis; postgraduate training at Johns Hopkins, Baltimore, Maryland, and Memphis EENT Hospital; first lieutenant, World War I; served as Montgomery County health officer 1940-41; past president, North Central District Medical Society; emeritus member of MSMA; died at Tyler Holmes Memorial Hospital, June 13, 1960, aged 84.

ROGERS, HAL THOMAS, Grenada. M.D., College of Physicians and Surgeons, Memphis, Tennessee; practiced medicine in Grenada for almost 40 years; died at Grenada Hospital, June 21, 1960, aged 78.

Book Reviews

Edema, Mechanisms and Management. A Hahnemann Symposium on Salt and Water Retention. Edited by John H. Moyer, M.D., professor and chairman of the department of medicine, Hahnemann Medical College and Hospital, and Morton Fuchs, M.D., assistant professor of medicine, Hahnemann Medical College and Hospital. Cloth, 833 pages. Philadelphia: W. B. Saunders Company, 1960. $15.00.

This book presents the proceedings of a symposium held in December 1959. More than 90 investigators, well known for their contributions to the fields of renal physiology, pharmacology, and the clinical syndromes associated with physiologic aberration of excess salt and water retention, participated in its compilation. The comprehensive review covers the many problems confronting, not only researchers, but clinicians actively engaged in the treatment of disorders associated with edema.

The book is divided into eight parts including: (1) fluid and electrolyte balance, (2) pharmacology and therapeutic use of diuretics, (3) iatrogenic edema, (4) hypertension, (5) toxemia of pregnancy and premenstrual tension, (6) edema of renal origin, (7) edema associated with liver disease, (8) congestive heart failure.

The presentations, generally, are so thorough and excellent that to select one particular group of papers to be superior to another would render an injustice to the participants. Careful reading of the chapters concerning basic renal physiology and pharmacology is strongly recommended for a better comprehension of the whys and wherefores of diuretic therapy. This reviewer was impressed, especially, with some of the papers on toxemia of pregnancy and also the role of aldosterone and its antagonists, i.e. the spironolactones.

Obstetricians would be particularly interested in the paper by Dr. Frank A. Finnerty, Jr. Dr. Finnerty writes that all the signs and symptoms of toxemia can be adequately explained by abnormal sodium retention and generalized vasoconstriction, the relationship between the two latter situations being unknown. He observes that sodium retention precedes generalized vasoconstriction and that prompt therapy of sodium retention usually prevents the development of generalized vasconstriction, thus preventing the development of toxemia. He states that the availability of chlorothiazide has completely changed the therapeutic approach to toxemia, replacing for the most part the previously employed reserpine drugs and hydralazine.

With respect to congestive heart failure, most participants agreed that hyperaldosteronism probably plays an important role. It was hypothesized that the increased secretion of aldosterone probably is stimulated by a reduced volume of blood within the volume receptors in the vascular territory of the carotid arteries. In the case of the cardiac causes of edema, the localized low blood volume stimulus to hyperaldosteronism results from reduction of the effective cardiac output. The increased aldosterone production causes sodium retention and a probable, secondary increase in ADH release which maintains the osmolarity of the extracellular fluid within normal limits by the retention of water.

Since the salt and water retained in this way would tend to be sequestrated in the areas of greatest venous hypertension, there would be relatively little increase in the volume of blood within the part of the vascular bed where the volume receptors are thought to be situated. The low volume stimulus to hyperaldosteronism would, therefore, persist, causing progressive sodium and water retention as long as the cardiac output remained low.

An expansion of the plasma volume would result from fluid retention, with consequent elevation of venous pressure and further embarrassment of cardiac function, completing a vicious cycle. Increasing edema would, therefore, result from this sequence of events. Thus, in addition to the previous theories of congestive heart failure, viz. "backward failure" and "forward failure," there is now hyperaldosteronism as a possible third mechanism. It would appear that now spironolactones increase, another agent will be added to the armamentarium for the management of "intractable" congestive heart failure patients as well as the edema associated with cirrhosis of the liver.

The panel discussions at the end of each part are excellent and tend to round out the entire presentation.

This is a lengthy work and requires, for the most part, slow and thorough reading but should make an excellent book for review purposes as well as reference.

WILLIAM H. ROSENBLATT, M.D.

The Office Assistant in Medical Practice. By Portia M. Frederick, instructor in medical office assisting, Long Beach City College, and Carol Towner, director of special services, Communications Division, American Medical Association. Second edition. Cloth, 407 pages, illustrated. Philadelphia: W. B. Saunders Company, 1960. $5.25.

This authoritative how-to-do-it guide should be required reading for physicians' girls Friday because it is a superior handbook of what the able medical office assistant should know how to do. The authors' approach is one of orientation and outline instruction as regards daily duties of the medical secretary, bookkeeper, and physician's aide. Unlike other office procedure manuals, *The Office Assistant* has a specialized application from a viewpoint of medical practice.

The 26 chapters run the gamut of duties and situations which the doctor's assistant may expect to encounter. Appropriately enough, the book begins with fundamentals on the proper role of the non-professional employee and pragmatic material on the profession of medicine with respect to ethics, professional procedure, conduct of a practice, and helpful hints on receiving patients, telephone etiquette, appointments, records-keeping, fees, and mail handling.

Of equal value are chapters on the business side of office practice with solid information on accounting, banking, billing, prepayment plans and health insurance. Virtually half of the book is devoted to assisting the doctor during examinations, preparation and care of equipment and instruments, and general information about office procedures in the examination and treatment rooms, procurement of medical supplies, and other practice-related duties.

Useful appendices include suggested reading and a glossary of the more frequently used medical abbreviations. The book is attractively presented in durable cloth binding over non-glare English finish paper. The publisher achieves excellent typographical results, making for easy reading and ready reference.

The work is one which should be read entirely and kept close by the office aide as a reference source. Physician-employers, too, will find it useful and highly suggestive of practice procedure improvement. The authors are among the outstanding authorities in this new field. Mrs. Towner has been closely identified with the American Association of Medical Assistants as a valued adviser in the development of the association's useful program. Portia M. Frederick is a respected teacher whose work has become widely known and appreciated.

Domestic Journals

Incidence of the Supine Hypotensive Syndrome in Late Pregnancy. F. Holmes: J. Obst. & Gynaec. Brit. Emp. 67:254 (April) 1960.

This excellent article deals with a problem which has been widely discussed but little studied. The development of hypotension in the supine position in late pregnancy is probably due to compression of the inferior vena cava by the gravid uterus with consequent impairment of venous return to the heart. Marked lordosis as is seen commonly in late pregnancy may contribute to this. The shock produced by this syndrome can be alarming, and there is some evidence to suggest that the rise in venous pressure below the obstruction may predispose to abruptio placentae.

The author studied 500 women at 36 weeks or more of gestation. There were 320 primigravidas and 180 parous women. The women lay in the supine position on an examination table at a regular antepartal visit. Blood pressure and pulse were recorded at one minute intervals for six minutes. A fall in systolic blood pressure of 20 mm. Hg. or more was noted in 70 per cent of the women studied and in 3.6 per cent this fall was 40 mm. or greater. Even among the 148 patients showing no significant fall in systolic blood pressure there was a rise in diastolic pressure in 45. Typical signs and symptoms were associated with the hypotension. It was noted that the postural hypotension became less marked as term approached and this change was perhaps related to the descent of the fetal head into the pelvis. In no patient did the changes persist after delivery.

Comment. The importance of the supine hypotensive syndrome lies in the possible development of abruptio placentae or fetal anoxia. Although these cannot be very common sequelae, it should

(Turn to page 476)

Recently Organized Street Medical Foundation Purchases Radioisotope Unit for Mercy Hospital

Newest medical note from Vicksburg: The Street Medical Foundation, organized and chartered in April, has purchased a radioisotope unit for the Mercy Hospital-Street Memorial.

To be delivered within 60 days, the unit is expected to aid greatly in diagnosis, treatment, and research, according to Dr. J. Robert Shell, hospital staff member in charge of the project.

The Street Medical Foundation was established, according to its constitution, to conduct and develop medical and scientific research, and to provide medical treatment. The basic funds for the Foundation were given by a family which have long been friends and patients of the Street Clinic, according to John Gill, business manager of the Clinic and treasurer of the Foundation.

Gill said the impetus for the organization of the Foundation was the need for specialized equipment, such as the radioisotope unit. He explained that the Foundation differs in two critical ways from the Clinic: (1) Its primary purpose is research, whereas this area is only a part of the Clinic's aims, and (2) Donations to the Foundation, a nonprofit organization, are tax-exempt.

Another project now under consideration by the Street Medical Foundation is specialized equipment for cardiovascular surgery. Dr. H. E. Kellum is in charge of the project.

The Foundation is managed by a 15-member Board of Trustees, selected from the hospital and clinic staffs and from leaders in the community. Officers are Dr. A. Street, senior member of the Street Clinic and medical staff of Mercy Hospital, president; Louis P. Cashman, Sr., publisher, Vicksburg *Evening Post,* vice president; Mrs. J. J. Newman, secretary, and John Gill, treasurer.

Other trustees are (from Vicksburg unless otherwise noted): L. C. Latham, R. C. Wilkerson, H. V. Cooper, L. B. McLain, Dr. Tom Dominick, Dr. John A. K. Birchett, Miss Amelia Levy, Judge R. B. Anderson of Port Gibson, Sister Mary Amadeus, Jack Grundfest of Cary, and Dr. R. H. Fenstermacher.

Pamphlet Connects Smoking and Lung Cancer

A possible causative relationship between cigarette smoking and lung cancer is the subject of a new health education pamphlet, "Memo to Adults About Cigarette Smoking," just published by the New York State Department of Health. The publication explains that numerous studies demonstrate statistically that there is a much higher incidence of lung cancer among smokers than non-smokers.

It lists other conclusions in the studies of a health-related nature and discusses "preventive" measures to reduce chances of developing cancer. The pamphlet states that there are eight carcinogens present in tobacco tar, concluding that lung cancer increases in proportion to the average number of cigarettes smoked daily. Preventive measures advocated are: 1. Don't get the smoking habit and if you now smoke, the best way to minimize chances of cancer is to stop. 2. If you feel you must smoke, reduce the number of cigarettes smoked daily.

Dr. Mangold To Publish Book

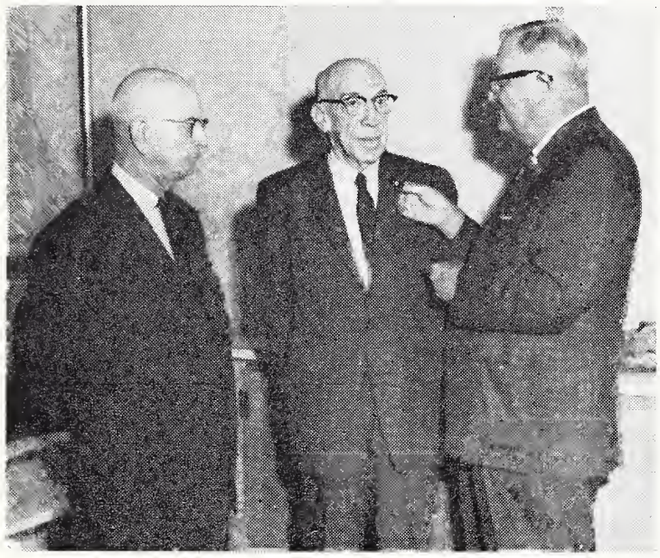
Dr. K. P. Mangold, 59-year-old Yazoo City physician, has signed a contract with Exposition Press of New York for publication of his book, *Victory Without War.*

Thesis of the book is that the West should use propaganda rather than military might as a weapon for peace. The Soviet rulers are not the "ideological heirs" of Marx and Lenin, writes Dr. Mangold as another axiom of *Victory Without War.*

A native of Johannesburg, Union of South Africa, Dr. Mangold came to the States in 1920 to study civil engineering at the University of Mich-

igan. He received his M.D. degree from the University of Vienna and later studied at the Royal College of Surgeons and the Royal College of Physicians, both in Edinburgh, Scotland, and the Royal College of Physicians and Surgeons in Glasgow.

Dr. Mangold and his wife, Dr. Maria Mangold, began practicing in Yazoo City in 1947. In 1950, he became an American citizen.



Two Meridian physicians, Dr. Julian T. Bailey, left, and Dr. K. T. Klein, center, were honored for their more than 50 years of medical service in special ceremonies at a medical staff meeting at St. Joseph hospital. Presenting 50-year-pins on behalf of MSMA is Dr. Lamar Arrington, member of the Board of Trustees. (Photo courtesy of Homer Cook, Meridian Star.)

University Awarded 16 Research Grants

The Mississippi Heart Association has awarded 16 cardiovascular research grants to the University of Mississippi School of Medicine, according to Dr. J. Manning Hudson, Jackson, MHA president. The grants total $29,000.

Additionally, said Dr. Hudson, the voluntary health agency has allocated $11,000 for two cardiovascular fellowships—one to the department of medicine for the fifth year and one to the department of physiology for the first year.

In all, the University will receive around $70,000 this year from state and national Heart Funds, according to Dr. Hudson. Other projects include the MHA savings program for a cardiovascular chair amounting to $17,000 and two American Heart Association grants totalling $13,310.

Recipients of the AHA grants are Dr. Arthur C. Guyton, chairman, department of physiology and biophysics, and Dr. William C. Holland, chairman, pharmacology department. Dr. Guyton was awarded $8,250 to refine his method for continuous recording of cardiac output. Dr. Holland was given $5,060 to help finance research on the effect of various drugs on heart beat irregularities. Dr. Holland's work will also be supported by a MHA grant.

The 16 MHA research grants were awarded as follows:

1. Dr. L. L. Sulya, chairman, biochemistry department, $1,500, renal disease.
2. Dr. M. D. Turner, assistant professor, biochemistry department, $2,000, catabolic enzyme activity in ischemic tissue.
3. Dr. Charles L. Dodgen, associate professor, biochemistry department, $2,000, cardiac enzymes of carbohydrate metabolism during stress.
4. Dr. J. L. Haining, assistant professor, biochemistry department, $2,000, effect of lipoxidase on high cholesterol diets.
5. Dr. Berwind Kaufmann, associate professor, physiology department, $2,000, effect of acute heart failure on blood volume readjustments following infusion.
6. Dr. George Armstrong, associate professor, physiology, $2,000, cardiovascular reflex activity in the unanesthetized and the anesthetized dog.
7. Dr. William C. Holland, chairman, pharmacology department, $1,500, effect of various drugs on heart beat irregularities.
8. Dr. Joel Brunson, chairman, pathology department, $1,500, streptococcal cardiac lesions in animals.
9. Dr. W. Lane Williams, chairman, anatomy department, $1,500, relation of the nature of dietary fat and choline to cardiovascular injury in mice.
10. Dr. Thomas M. Blake, associate professor, department of medicine, $2,000, anticoagulant therapy in acute myocardial infarction.
11. Dr. Ben B. Johnson, assistant professor, department of medicine, $2,000, role of blood anemia in intractable congestive failure.
12. Dr. Raymond Grenfell, clinical assistant professor, department of medicine, $2,000, double blind study on drugs for hypertension.
13. Dr. Watts Webb, associate professor, department of surgery, $2,000, cardiopulmonary transplantation experiments.
14. Dr. W. A. Neely, assistant professor, department of surgery, $2,000, effect of burns upon renal and intestinal blood flow.
15. Dr. Warren N. Bell, chairman, clinical

laboratory sciences department, $1,500, effects of Dicumarol on the coagulation mechanism.

16. Dr. L. W. Fabian, chairman, anesthesiology department, $1,500, effect of certain inhalation anesthetics on maintenance of circulatory stability during shock.

The Mississippi Heart Association research grants and fellowships committee includes Dr. Lucian M. Ferris, Vicksburg, Dr. Edward C. Hamilton, Gulfport, and Dr. Grenfell, Dr. Guyton, and Dr. J. R. Snavely, all of Jackson.

Taylor to Be Chairman Of 93rd Annual Session

Dr. C. D. Taylor, Jr., Pass Christian, will be general chairman of the 1961 Annual Session. He was named by the Council on Scientific Assembly at its June 23 meeting in Jackson.

During this initial planning session, the Council did the groundwork for the 93rd Annual Meeting which will be held May 9-11, 1961, in Biloxi. The Council unanimously adopted the following schedule:

Tuesday, May 9	Morning, House of Delegates Afternoon, Sections on Pediatrics and Medicine
Wednesday, May 10	Morning, Sections on Ob-Gyn and Preventive Medicine Afternoon, Section on General Practice
Thursday, May 11	Morning, Sections on EENT and Surgery Afternoon, House of Delegates

In other action, the Council also:

(1) Decided that the Tulane University and University of Tennessee medical alumni would meet simultaneously on Tuesday night and the University of Mississippi medical alumni on Monday night in accordance with the rotation policy adopted during the 1959-60 association year.

(2) Directed that requests for meal occasions from groups not meeting as formal bodies of MSMA be directed to the executive office for scheduling.

(3) Ruled that each section may have five papers including two out-of-state essayists.

(4) Named Drs. W. Q. Cole, Jr., Jackson, Carl E. Lewis, Jackson, and W. E. Lotterhos, Jackson, as members of the 1960 committee on exhibits.

Present at the meeting were Drs. William E. Lotterhos, MSMA secretary-treasurer and chairman of the Council; R. J. Moorhead, Yazoo City, chairman, Section on General Practice; Eugene M. Murphey, III, Tupelo, chairman, Section on Medicine; Carl E. Lewis, Jackson, chairman, Section on Obstetrics and Gynecology; W. Q. Cole, Jackson, chairman, Section on Pediatrics; A. N. Morphy, Gulfport, chairman, Section on Preventive Medicine; and J. T. Davis, Corinth, chairman, Section on Surgery.

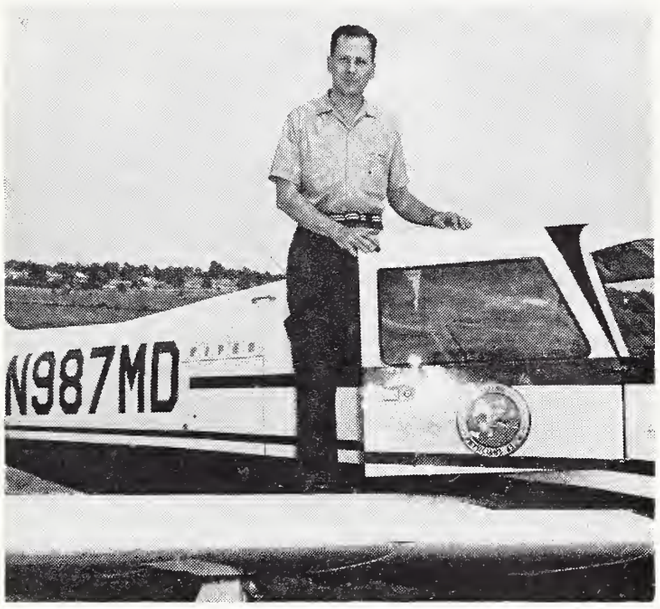
Also, Drs. T. H. Mitchell, Vicksburg, secretary, Section on General Practice; Michael Newton, Jackson, secretary, Section on Obstetrics and Gynecology; P. T. Howell, Forest, secretary, Section on Preventive Medicine.

Also, G. Swink Hicks, Natchez, MSMA president; Lawrence W. Long, Jackson, president-elect; Mrs. Lee R. Reid, Jackson, president, Woman's Auxiliary to MSMA, Rowland B. Kennedy, Jackson, executive secretary, and Charles L. Mathews, Jackson, assistant executive secretary.

Shown as they plan the 93rd Annual Session are members of the Council on Scientific Assembly. Left to right they are Long, Mathews, Kennedy, Newton, Cole, Lewis, Lotterhos, chairman of the Council, Hicks, MSMA president, Mrs. Reid, Auxiliary president, Moorehead, Mitchell, Davis, Murphey, Howell, and Morphy.

Jackson Flying Doctor Awarded Hawaiian Jaunt

Dr. Curtis W. Caine, Jackson Flying Physician, took off July 6 for an all-expense-paid tour of Hawaii—the prize in a contest sponsored by the national association.



Boarding his Piper Comanche is Dr. Curtis Caine, Jackson, recently awarded a 14-day vacation in Hawaii by the National Flying Physicians Association.

As a result of its work in membership drives and disaster planning during the past year, the Mississippi chapter of the Flying Physicians Association tied with Indiana for the national activities award. First prize: a 14-day vacation tour of the Hawaiian islands. Dr. Caine was selected to take the trip by his 30 fellow members of the Mississippi group.

Dr. Caine plans to fly his own plane to Los Angeles and then go by Boeing 707 Jetliner to Hawaii. Three days of the vacation will be spent at a Flying Physicians scientific meeting and the rest in a tour of the islands.

The Flying Physicians is a nationwide organization having active chapters in all but one or two states. Organized in 1955, the association now has approximately 2,000 members and 2,000 planes.

To become a member, an applicant must be (1) a licensed doctor, (2) a graduate of an accredited medical school, (3) a member of AMA and a state medical association, (4) a licensed pilot with sufficient proficiency to operate in instrument weather conditions.

The national association holds two meetings yearly—a scientific session and a cruise. Its general aim is to keep the nation's physician-pilots aware of the latest in safety regulations and procedures.

Main project at the moment is a disaster plan in cooperation with Civil Defense. Generally, the plan provides for doctors to fly into any disaster area equipped to give medical aid at no expense. Such a plan financed by the government would cost approximately $60 million per year.

Dr. Jack Daniels, Hattiesburg, is chairman of the Mississippi Chapter. Other officers are Dr. James L. Royals, Jackson, vice chairman; Dr. Ben N. Walker, Jr., Jackson, secretary-treasurer, and Dr. Caine, chairman of the disaster committee.

Long Addresses Meridian Kiwanis Club

Government medicine is the keystone in the arch of socialism, MSMA President-elect Lawrence W. Long, Jackson, told the Meridian Kiwanis Club at their June 29 meeting.

Speaking on "Seeds of Destruction," Dr. Long warned that piecemeal legislation allowing the government to inch further into the field of medicine would someday lead to total socialization.

Dr. Long said that the government's part in medical practice is now so extensive that there is virtually competition for patients among tax-supported agencies. Every executive department of the United States government conducts some sort of medical service program, he said.

Dr. Long stated that the three primary types of medical service—public health, Veterans Administration, and the armed forces—were good in perspective but that they had outgrown their original purposes. Vital points: (1) Over half a million veteran-patients are treated in VA facilities each year, but only 16 per cent are victims of service-incurred illness or injury. (2) The National Institutes of Health annually spend only slightly less than $1 billion in research. (3) Under the Social Security Act more than five million Americans receive yearly federal monies for the purchase of physician and hospital services.

In discussions on the much debated Forand bill providing for federal medical care for the aging, Dr. Long said, "In Mississippi we are meeting this need through our realistic State Hospital Commission program for care of the indigent." On the Eisenhower administration program

based on a federal-state matching fund formula, he commented, "It is fallacious in that it wrongly assumes that everyone over age 65 is in need of health care and simply can't afford it."

Turning to the compromise program, the so-called Mills bill—a federal-state matching situation with applicability limited to those groups now covered under public assistance, Dr. Long observed that the bill had the same fallacy as the others—the problem can be better handled on the state and local level. "It doesn't take much legislative savvy to recognize that we are in the era of foot-in-the-door legislation," he said.

"You and I must never forget," Dr. Long concluded, "That any government big enough to give us everything we want is also big enough to take away everything we've got."

Transactions of 37th Annual Session

The Woman's Auxiliary to the Mississippi State Medical Association held its pre-convention board meeting at 4:30 p.m., on May 9, 1960, in the Coronet Ballroom of the King Edward Hotel, Jackson, with 24 members present. Following the invocation, Mrs. James T. Thompson, president, led members in the Auxiliary pledge. Mrs. Kalford W. Howard, president-elect, Woman's Auxiliary to the Southern Medical Association, was introduced as an honored guest.

The minutes of the last meeting were read and approved. The report of the treasurer showed 785 members and a balance of $834.79. On motion by Mrs. A. T. Tatum, second Mrs. Lee R. Reid, the report of the treasurer was adopted.

The legislative chairman, Mrs. James G. Thompson, suggested in her report the possibility of having two legislative chairmen. She recommended that Auxiliary members exert their influence in civic organizations in opposing Forand-type legislation. Mrs. A. T. Tatum reported 78 *Bulletin* subscriptions.

Mrs. John R. Bise, nurse loan chairman, stated that the Auxiliary now has on contract two nurses who will soon complete training and begin repayment of their loans. A third loan recipient is making payments on her loan; this money has been placed in an account in Deposit Guaranty Bank and Trust Company. One new application has been approved and will require $300 to begin training.

Mrs. R. W. Crowell, mental health chairman, reported increased interest with numerous Auxiliaries presenting programs and films on mental health. Mrs. H. H. McClanahan, Jr., urged continued cooperation in securing information and records for research and romance of medicine.

Mrs. M. M. Snelling, budget chairman, presented the proposed budget for the 1960-61 year. On motion by Mrs. R. C. O'Ferrall, second Mrs. S. B. McIlwain, the budget was approved. This budget will be recorded in the minutes of the General Session.

The President urged further Auxiliary support for AMEF and stressed its importance in the fight against governmental control of medical education. Mrs. Lee R. Reid moved, second Mrs. M. M. Snelling, that the state Auxiliary donate $100 to AMEF, earmarking it for the University of Mississippi School of Medicine. Motion carried.

Mrs. S. B. McIlwain, revisions chairman, reported that the work of her committee was not complete. She suggested a continuation of the work, returning it to the original committee.

Mrs. R. C. O'Ferrall, Preventorium chairman, reported $5,100 on deposit in the Preventorium fund. She stated that $190 interest, plus $5 from the Jackson County Unit and $5 from the Central had been forwarded to Miss Effie Clark at the Preventorium.

Mrs. E. A. Trudeau, councilor, ninth district, reported 85 members in the Coast Counties Auxiliaries. The motion to adjourn was made by Mrs. R. W. Crowell, second Mrs. R. C. O'Ferrall, and carried.

GENERAL SESSION

Mrs. James T. Thompson, president, presided at the general session of the Woman's Auxiliary to the Mississippi State Medical Association held in the Coronet Ballroom, King Edward Hotel, Jackson, on May 10, 1960, at 8:30 a.m. Immediately preceding the session, Mrs. Thompson entertained Auxiliary members and guests with a continental breakfast.

The invocation was given by Mrs. M. M. Snelling, Gulfport; Mrs. Mayo Flynt, Meridian, led the Auxiliary pledge. Mrs. Lloyd Deddens, president, Central Medical Auxiliary, gave the address of welcome with the response by Mrs. William Crowson, Clarksdale. The president presented the convention chairman, Mrs. Fred Hollowell, Jackson, who presented the members of her committee.

The following honored guests were recognized: Mrs. Frank Gastineau, president, Woman's Aux-

iliary to the American Medical Association; Mrs. Kalford W. Howard, president-elect, Woman's Auxiliary to the Southern Medical Association; Mrs. G. Swink Hicks, wife of the president-elect of MSMA; and Mrs. Stanley A. Hill, wife of the president of MSMA.

A motion to dispense with the reading of the minutes of the last general session was made by Mrs. Stanley A. Hill, second Mrs. H. C. Ricks, and carried. Reports from AMA and SMA Auxiliaries were presented by Mrs. Stanley A. Hill and Mrs. T. A. Baines, respectively.

The recommendation of the Executive Board that the Auxiliary donate $100 to AMEF, earmarked for the University of Mississippi School of Medicine, was read by the Secretary. The recommendation was accepted on motion by Mrs. M. M. Snelling, second Mrs. A. E. Brown. Mrs. John Egger announced an additional donation to AMEF in honor of Mrs. B. H. Booth of Drew.

The report of the treasurer reflected a total of 785 members and a balance of $740.29. On motion by Mrs. H. C. Ricks, second Mrs. Mayo Flynt, the report was approved. Distinguished guests from the Mississippi State Medical Association and American Medical Association were introduced by the president: Dr. Stanley A. Hill, Corinth, president, MSMA; Dr. G. Swink Hicks, Natchez, president-elect, MSMA; Dr. A. Street, Vicksburg, chairman, Auxiliary Advisory Committee; Dr. E. Vincent Askey, Los Angeles, president-elect, AMA.

Unit presidents' reports of outstanding work followed roll call. The budget chairman, Mrs. M. M. Snelling, presented the proposed budget for the year and moved that it be accepted, second Mrs. Mayo Flynt, and carried.

BUDGET FOR 1960-61

Balance brought forward	$1,152.00
10% contingent fund	115.00
President	400.00
President-elect	200.00
Yearbooks (including postage)	280.00
Stationery	40.00
Newsletters	10.00
Miss. Women's Cabinet dues	5.00
Organization chairman	10.00
Nominating Committee chairman	10.00
Treasurer	10.00
Postage for officers and chairmen	44.00
President's pin	28.00
	$1,152.00

Mrs. Mayo Flynt, chairman, presented the following nominating committee report: president, Mrs. Lee R. Reid, Jackson; president-elect, Mrs. John Egger, Drew; treasurer, Mrs. J. D. Simmons, Cleveland; corresponding secretary, Mrs. F. E. McCullough, Jackson; recording secretary, Mrs. Wendell Holmes, McComb; first vice president, Mrs. James T. Thompson, Moss Point; second vice president, Mrs. A. T. Tatum, Hattiesburg; third vice president, Mrs. Eldon L. Bolton, Biloxi; fourth vice president, Mrs. Richard Riley, Meridian.

The motion to elect these officers as presented for 1960-61 was made by Mrs. R. W. Crowell, second Mrs. H. C. Ricks, and carried. The report on credentials and registration was presented by Mrs. Fred D. Hollowell, convention chairman, showing 231 members registered.

Delegates to the AMA Auxiliary were elected as follows: delegates—Mrs. Lee R. Reid, Jackson; Mrs. A. E. Brown, Columbus; Mrs. T. A. Baines, Jackson; Mrs. G. Swink Hicks, Natchez; alternates—Mrs. J. P. Culpepper, Hattiesburg; Mrs. Stanley A. Hill, Corinth; Mrs. Raymond F. Grenfell, Jackson.

An impressive memorial service was conducted by Mrs. L. O. Stewart, Pascagoula, honoring the following deceased members: Mrs. Byron Alexander, Jackson; Mrs. William M. Dabney, Crystal Springs; Mrs. R. C. Eley, Moss Point; Mrs. Theodore B. Lewis, Clarksdale; Mrs. Frank G. Schmidt, Ocean Springs; Mrs. W. C. Poole, Cary; and Mrs. V. B. Philpot, Memphis.

The president's report of the year's accomplishments was read by Mrs. James T. Thompson. At the conclusion of her report, Auxiliary members gave her a rising vote of thanks for her outstanding leadership. Mrs. Frank Gastineau, president, Auxiliary to AMA, informed members of arrangements for the AMA Annual Session at Miami in June.

Mrs. Thompson introduced an honored guest, Mrs. Kalford W. Howard, Portsmouth, Virginia, president-elect of the Woman's Auxiliary to the Southern Medical Association. Mrs. Howard spoke of the objectives of the Southern Auxiliary, of its friendliness, and of its purpose in promoting observance of doctor's day and the research and romance of medicine.

Mrs. Lee Reid made the presentation of the state Auxiliary's gift to Mrs. J. D. Simmons, Cleveland, who has served as an officer in the Auxiliary for 25 years. Mrs. Simmons expressed her appreciation. Courtesy resolutions were read by Mrs. A. E. Brown, Columbus, and the meeting was adjourned.

COURTESY RESOLUTIONS

WHEREAS, The Woman's Auxiliary to the Mississippi State Medical Association has been the recipient of many courtesies and kindnesses during this, its 37th Annual Session, May 1960, therefore, be it

Resolved, That the Woman's Auxiliary to MSMA express its appreciation to the following members and others whose efforts and cooperation have made this a successful and pleasant convention:

To our charming president, Mrs. James T. Thompson, whose gracious and wise leadership and loyal service have inspired enthusiasm and admiration among our members,

To our officers and chairmen for their initiative and conscientious efforts which have made this an outstanding year,

To Mrs. Fred D. Hollowell, general chairman of the convention, and to her committees for their thoughtful planning and tireless efforts which have provided for our pleasure,

To Dr. Edwin Vincent Askey, president-elect of AMA,

To Dr. Stanley A. Hill, president, MSMA,

To Dr. G. Swink Hicks, president-elect, MSMA, and to Dr. A. Street, chairman, advisory committee, for their greetings, assistance, and encouragement,

To Mrs. Kalford W. Howard, president-elect, Southern Medical Auxiliary, for her outstanding message,

To Mrs. Frank Gastineau, president, Woman's Auxiliary to AMA, for her inspirational presence and leadership,

To the newspapers for their outstanding coverage, and to the King Edward Hotel for their courtesies and kindnesses,

To all on the program, and any others who helped to make this convention a success, and be it further

Resolved, That these resolutions be recorded in the minutes of this meeting.

LUNCHEON MEETING

A luncheon honoring Mrs. Frank Gastineau, president, Woman's Auxiliary to the American Medical Association, was held in the Crown Ballroom, King Edward Hotel on May 10. Presiding was Mrs. James T. Thompson, president, Woman's Auxiliary to MSMA, who gave all present a warm and cordial welcome.

The invocation was given by Mrs. W. H. Anderson, Booneville. Mrs. Frank Gastineau and Mrs. Kalford W. Howard were presented as honored guests. Mrs. A. C. Bryan, Jr., Meridian, state AMEF chairman, made announcements and delivered certificates of achievement from the AMEF to Auxiliaries with outstanding records of supporting this fund.

Mrs. Gastineau's address presented with charm and humor the wife's place in the medical profession and gave serious emphasis to her importance as a working Auxiliary member. New officers were installed by Mrs. Gastineau who spoke of the responsibilities and duties of each.

The gavel and pin were presented by Mrs. Thompson to her successor, Mrs. Lee R. Reid, who accepted with a response. Mrs. Joseph B. Rogers, Oxford, made the presentation of the past president's pin to Mrs. Thompson.

PAST PRESIDENTS' BREAKFAST

Mrs. Mayo Flynt was hostess at the past presidents' breakfast, May 11, at 8:00 a.m., in the Walnut Room, King Edward Hotel. Flowers for the occasion were provided by Mrs. John B. Howell, Sr., Canton, a former president who graciously makes this contribution annually.

A coffee and fashion show at Kennington's, hosted by Central Medical Auxiliary, was well attended. Mrs. Fred Hollowell, convention chairman, and Mrs. Johnson Witt, fashion show chairman, were responsible for the event. Mrs. Robert Rall was commentator as models from Central Medical Auxiliary presented "A Day in the Life of a Doctor's Wife."

OFFICERS 1960-61

President, Mrs. Lee R. Reid, Jackson; president-elect, Mrs. John Egger, Drew; first vice president, Mrs. James T. Thompson, Moss Point; second vice president, Mrs. A. T. Tatum, Hattiesburg; third vice president, Mrs. Eldon L. Bolton, Biloxi; fourth vice president, Mrs. Richard F. Riley, Meridian; treasurer, Mrs. J. D. Simmons, Cleveland; corresponding secretary, Mrs. F. E. McCullough, Jackson; recording secretary, Mrs. Wendell Holmes, McComb; historian, Mrs. T. A. Baines, Jackson; parliamentarian, Mrs. S. Lamar Bailey, Kosciusko.

CHAIRMEN

Program, Mrs. Verner Holmes, McComb; legislation, Mrs. H. H. McClanahan, Jr., Columbus; *Bulletin,* Mrs. Tom Marland, Jackson; nurses loan fund, Mrs. John R. Bise, III, Jackson; recruitment, Mrs. George Townsend, Forest; doctor's day, Mrs. Jack Daniels, Hattiesburg; mental health, Mrs. L. T. Carl, Jackson; research and

romance, Mrs. George E. Twente, Jackson; memorial, Mrs. H. C. Ricks, Sr., Jackson.

Budget, Mrs. A. Street, Vicksburg; revisions, Mrs. Mal S. Riddell, Winona; AMEF, Mrs. A. E. Brown, Columbus; health, Mrs. A. L. Gray, Jackson; civil defense, Mrs. Glen Pearson, Hattiesburg; safety, Mrs. W. M. Wood, Carthage; public relations, Mrs. A. T. Tatum, Hattiesburg; *Today's Health,* Mrs. Richard F. Riley, Meridian; Preventorium, Mrs. R. C. O'Ferrall, Jackson; yearbook editor, Mrs. James T. Thompson, Moss Point.

COUNCILORS

First district, Mrs. William Crowson, Clarksdale; second district, Mrs. Joseph Rogers, Oxford; third district, Mrs. M. Q. Ewing, Amory; fourth district, Mrs. W. B. Hunt, Grenada; fifth district, Mrs. John B. Howell, Jr., Canton; sixth district, Mrs. Lamar Arrington, Meridian; seventh district, Mrs. J. P. Culpepper, Hattiesburg; eighth district, Mrs. Frank C. Massengill, Brookhaven; ninth district, Mrs. E. A. Trudeau, Biloxi.

President's Report To Auxiliary

Years are short at best and the medical year of 1959-60 has been no exception. However, the Women's Auxiliary to the Mississippi State Medical Association has, in many instances, prolonged the yearly span in work accomplished. On the other hand, of course, in many cases we have fallen far short of our potential.

To begin, happily, with the plus side: AMEF contributions have reached $563.70, an amount which is much too small for Mississippi, yet it still represents an increase of $231 over May's total of last year.

The Bulletin comes to 78 people in the state. Two Auxiliaries, Jackson County and North Central, report 100 per cent subscriptions. It is encouraging to note that these figures are more than double those of last year.

Perfect and complete cooperation exists between the Auxiliary and the state medical association. On several occasions throughout the year, Dr. Stanley Hill, the president, invited the Auxiliary president and her Board to meet with various groups of the association. Furthermore, the services of the executive secretary of the association, Mr. Rowland Kennedy, and his efficient office force are available to the Auxiliary at all times, particularly preceding and during the state convention when name tags, clerical help, and financial assistance are obtained from the association. The Auxiliary president appeared before the House of Delegates and Dr. Hill was the speaker at one of the meetings of the Executive Board and at the business session of the annual convention of the Auxiliary.

Programs for the year followed closely the suggestions offered by the national organization through which many films were obtained, those on mental health, safety, cancer, and our own Preventorium having been most frequently used. Numerous programs were built around AMEF and the legislative emergency. Nine Auxiliaries published yearbooks and eleven presented orientation programs about the AMA and the local health departments.

Through the mediums of P-TA, Women's Cabinet, blood bank, cancer, polio, heart, and Red Cross drives, hospital, and various community projects, Auxiliary members unselfishly and willingly donated some 84,590 hours of service in 1959-60.

The president and president-elect, together with the Executive Board, and representatives from several of the county groups, attended the fall legislative Conference which was called by the president of the state association for the purpose of explaining the dangers of Forand-type legislation and outlining a course of preventive action on the part of doctors and their wives. In the months following, through pamphlets, speakers, and letters, the Auxiliary performed its task of publicizing the imminent danger of socialization. Closely allied with this program was the Auxiliary's essay contest, a project which saw gratifying acceptance from 58 young people who submitted papers on the advantages of private medical care; and the three winners, one of whom placed twelfth in the nation, were presented their awards before the House of Delegates at the state convention.

Mississippi has an Auxiliary membership of 786, an increase of 36 over last year. There are 23 organized constituent Auxiliaries and no unorganized counties. Several of these groups report 100 per cent membership.

Nurse recruitment is an ever-important side of our Auxiliary program. During the past year, 14 nurses were enlisted, and four Future Nurses' Clubs were formed. A total of $900 was granted in loans, and one $300 scholarship was awarded. These figures represent local county activity; on

the state level, a loan of $300 will be granted in the near future to a well-screened applicant.

Between the mental health committee of the Auxiliary, the state Mental Health Association, the Family Service Organization, P-TA, and the Women's Cabinet of Public Affairs, there exists close liaison which, in the last medical year, resulted in many worthwhile projects such as: the showing of film strips examining present facilities and future needs of retarded children; a silver tea given by the East Mississippi Auxiliary at the state hospital of that section; a Christmas party at which 40 women in Whitfield state hospital were entertained by the Central Auxiliary; another yuletide party which saw the distribution of gifts to the children in the Cerebral Palsy School of Jackson County; and the sponsoring, by Clarksdale and Six Counties, of monthly speakers on mental health for the high school graduating classes in Clarksdale and Lambert.

As for safety, three Auxiliaries offer courses in baby sitting. Materials on use and misuse of plastic film, farm and home safety, the aged and their families, and water safety have been used by all of the 23 units. Of 125 public schools, 100 offer drivers' training classes. The organization of school safety patrols has been urged, and an undetermined number have been started during the year. The Lowndes County Auxiliary engaged 60 state officers who talked on highway safety to school children, both white and colored, in grades one-six.

Two counties reported programs on civil defense at their meetings and the services of the Auxiliary have been offered to the state civil defense office. All material received from national has been distributed by the chairman, and the president has, in her talks to the various groups, stressed the importance of preparedness.

Entertainment for Doctors' Day took many different forms, but each county participated. The fund for the Preventorium has reached the total of $5,000 with the interest—$200—being sent to the institution for use as the need arises.

During the year the president has traveled more than 6,000 miles in visiting all but one of the local Auxiliary units. She attended the AMA convention in Atlantic City, the Southern Medical Association in Atlanta; and, together with the president-elect, the Presidents' Conference in Chicago. Without a doubt, much more than this report shows could have been accomplished; yet the work progresses in a healthy manner, and the future affords a challenge as well as the opportunities for meeting that challenge. The year has been a pleasure from beginning to end and it is with a sense of deep and sincere gratitude that this report is submitted.

Mrs. J. T. Thompson
Moss Point

Auxiliary President Stresses 'Courageous Citizenship'

Doctors and their wives must strive for "courageous citizenship," the incoming Woman's Auxiliary president told Auxiliary members at the recent AMA 37th Annual Convention in Miami Beach.

In her inaugural message, Mrs. William Mackersie, Detroit, emphasized personal citizenship as a major goal. Other projects stressed by the new president included recruitment for health careers, positive legislative action, and fund-raising for the nation's medical schools.

Mrs. Mackersie succeeds Mrs. Frank Gastineau, Indianapolis. President-elect is Mrs. Harlan English, Danville, Ill.

Other Auxiliary officers installed during the four day convention are: first vice president, Mrs. William G. Thuss, Ala.; regional vice presidents—Mrs. Hannibal Hamlin, R. I., eastern; Mrs. C. Rodney Stoltz, S. D., north central; Mrs. W. W. Hubbard, Tenn., southern; Mrs. Hiram D. Cochran, Ariz., western; treasurer, Mrs. Charles L. Goodhand, W. Va.; constitutional secretary, Mrs. T. A. Poska, Calif.; directors—Mrs. David C. Boyer, Colo.; Mrs. Robert D. Croom, Jr., N. C.; Mrs. Richard C. Bellamy, Tex.

At a luncheon honoring national past presidents, the Auxiliary presented $170,230 to the American Medical Education Foundation. For the first time, the "Ethel Gastineau Trophy" was awarded to the Woman's Auxiliary to the Tennessee State Medical Association for outstanding efforts on behalf of the AMEF. This trophy was presented last fall to Mrs. Gastineau for her continuing work with AMEF and established by her as a traveling trophy to be awarded annually.

AMEF awards of merit were presented to the auxiliaries of the following state medical societies: Hawaii, Alaska, Nevada, New Hampshire, Indiana, Tennessee, Wyoming, Arizona, Ohio, and Alabama. The National Auxiliary, Mrs. Gastineau, and Mrs. Karl F. Ritter, Lima, Ohio, also received merit awards.

Auxiliary registration for the 37th Annual Convention totalled 2,202.

Gulfport Auxiliary Names Mrs. Snelling President

Mrs. M. M. Snelling, Handsboro, will serve as president of the Gulfport Medical Auxiliary for the coming year. Mrs. C. G. Boyette, Biloxi, is past president, and Mrs. Hurd Gaddy, Gulfport, is president-elect in the Auxiliary's plan of succession.

Other officers named to serve during 1960-61 are: Mrs. A. C. Hewes, vice president; Mrs. Charles Floyd, second vice president; Mrs. Henry Haberyan, secretary, and Mrs. Fred Walker, treasurer. All are from Gulfport.

New committee chairmen appointed by Mrs. Snelling are as follows (all are from Gulfport unless otherwise noted): Mrs. G. B. Flagg, parliamentarian; Mrs. D. J. Geraci, program; Mrs. E. T. Riemann, Jr., *Today's Health;* Mrs. E. C. Hamilton, research and romance; Mrs. O. D. Dabbs, Jr., assisted by Mrs. Robert Mitchell, Handsboro, and Mrs. E. T. Riemann, Jr., hospitality.

Also Mrs. Tom E. Benefield, Jr., Mississippi City, publicity; Mrs. Fred Hoffman, bulletin; Mrs. Richard Gates, legislation; Mrs. A. C. Hewes and Mrs. H. K. Rouse, Jr., essay contest; Mrs. A. V. Hays, civil defense; Mrs. E. N. Throop, AMEF; Mrs. Hurd Gaddy, Mrs. A. J. Gavigan, and Mrs. George Rogers, Handsboro, future nurses club; Mrs. Charles Floyd, mental health.

---

be realized that they may rarely occur at the end of pregnancy whenever the patient is required to lie flat, whether this be at a routine antepartal visit or on an operating table for the performance of a cesarean section. It would seem worthwhile for the physician to attempt to mitigate the possible severity of the syndrome by (1) attempting to prevent lumbar lordosis during pregnancy by suitable posture exercises, (2) propping women's heads and backs up during antepartal examination and during labor and delivery, and (3) using particular care regarding position during the performance of cesarean sections.

MICHAEL NEWTON, M.D.

SIRS: I particularly enjoyed the article by Dr. Thomas J. Marland, "Cardiac Emergencies During Anesthesia," in the June issue of the JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION, especially in its definitions as to the cause of acute cardiac failure, the clear-cut explanation of the genesis of cardiac arrest, and the details of the management of cardiac arrests.

However, I would like to take issue with the statement concerning the treatment of paroxysmal arrhythmias during anesthesia. I do agree that discontinuing the anesthetic and promoting the elimination of the agent is usually all that is necessary, but persistence of arrhythmia resulting in a definite decrease in measurable cardiac output must be handled by more than atropine and quinidine.

Atropine is only of use, of course, in the sinus bradycardias secondary to vagal reflexes initiated by the anesthetic or by surgical procedure. When these are severe, they might be handled quite well by the intravenous administration of .4 to 1 mg. of atropine. However, the patient should be well oxygenated and hyperventilated first and atropine injected only if the bradycardia persists.

In reference to the intravenous quinidine, I would like to state categorically that quinidine should never be used intravenously except as a last resort and certainly not in the anesthesized state. Paroxysmal atrial tachycardia, paroxysmal auricular fibrillation, and paroxysmal flutter can all be handled much more safely and more efficiently with the use of intravenous digitalis—that is, Cedilanid.

Quinidine intravenously is not only productive of severe hypotension, but it has a rather high incidence of precipitation of ventricular fibrillation and ventricular standstill, especially in the hypoxic patient. It is dangerous to use in the alert and conscious patient and most cardiologists believe that when quinidine must be administered, subcutaneous administration gives just as rapid an effect as does the intravenous and is much safer.

Let me commend the author again on this very fine article. I am sure that there will always be some inevitable difference of opinion between cardiologists and anesthesiologists as to the management of arrhythmias during anesthesia.

JOSEPH P. MELVIN, JR., M.D.
JACKSON, MISSISSIPPI

Dietary Linoleic Acid and Linoleate—*Effects in Diabetic and Nondiabetic Subjects with and without Vascular Disease*

A paper by Laurance W. Kinsell, M.D., et al., excerpted from Diabetes—The Journal of the American Diabetes Association, May-June 1959

"*Linoleic acid as the major 'hypocholesterolemic agent' in vegetable fats.* The question has been raised as to the mechanism of lowering of the plasma lipids by a variety of vegetable fats. Among the entities present in or absent from vegetable fat which have been considered are: (a) the absence of cholesterol; (b) the presence of certain vegetable sterols; (c) the presence of certain vegetable phospholipids; (d) the nature of one or more of the fatty acids present; (e) the presence of trace materials.

in the diet

The absence of cholesterol has been excluded as a major factor.[5a] Phospholipids, if they contain a sufficient quantity of unsaturated fatty acids may produce a striking reduction. In our experience thus far saturated phospholipids fail to produce such an effect.[7]

Beveridge and his associates believe that vegetable sterols, particularly beta-sitosterol, are responsible to a significant degree for the cholesterol-lowering effect.[8] In our experience the vegetable sterols have a relatively weak and unpredictable effect of this sort.

Since the fatty acids of animal fats are predominantly saturated, and the fatty acids of most vegetable fats are predominantly polyunsaturated, with linoleic acid as the major component of the vegetable fats which lower cholesterol and other lipids, the question arises whether linoleic acid per se is capable of lowering plasma lipids. As reported previously[7] this is indeed the case. In a recent study in a young male with peripheral atherosclerosis in association with elevation of plasma cholesterol and of total lipids, ethyl linoleate produced a greater fall in the plasma lipid levels than had moderate amounts of natural sources of unsaturated fat. Linoleic acid, therefore, appears to be the most important single lipid-lowering component of vegetable fat.

* * *

Significantly higher levels of cholesterol were observed during oleate administration than during administration of equal amounts of linoleate. The relatively low cholesterol values during the second oleate period may have been related to linoleate stored in fat depots. The fatty acid composition of the cholesterol esters reflected the fat which was fed, i.e., the mono-enoic† acid content averaged more than 40 per cent during oleate feeding and less than 20 per cent during linoleate ingestion. Essentially, a mirror image of this resulted during linoleate feeding, at which time di-enoic acid predominated.

* * *

The data presented in this paper appear to establish that linoleic acid administered either as purified ethyl ester or as naturally occurring fat, in sufficient quantity, in properly constructed diets, will reduce plasma lipids to normal levels. The amount of linoleic acid required appears to bear a direct relationship to the amount of saturated fat included in the diet. Linoleic acid requirement may also bear a significant relationship to the amount of atherosclerosis present.

The transition from evaluation of the effect of dietary entities upon plasma lipids, to the evaluation of the effect of such materials upon vascular disease is difficult. However, such evaluation is not impossible. The requisites are adequate measuring sticks and well-controlled studies of sufficient duration. The duration of observation of effects of unsaturated fat in diabetic and nondiabetic patients with vascular disease is in no instance more than five years, and in the majority of instances, less than three. Our present impression is that improvement has occurred in some patients with atherosclerosis and with diabetic retinal and renal disease which was more than we would have anticipated in terms of the natural course of the disease. However, since it is well known that major fluctuations in these diseases can occur in individuals receiving no treatment, we believe it is appropriate at this time to say that no untoward effects appear to result when one prescribes diets containing large amounts of unsaturated fat for patients with such diseases, and it is not impossible that beneficial effects may be associated with such diets."

* * *

5a Kinsell, L.W., Partridge, J. W., Boling, L., Margen, S., and Michaels, G.D.: Dietary modification of serum cholesterol and phospholipid levels. J. Clin. Endocrinol and Met. 12:909, 1952.

7 Kinsell, L. W., Friskey, R., Splitter, S., Michaels, G. D.: Essential fatty acids, lipid metabolism, and atherosclerosis. Lancet 1:334, 1958.

8 Beveridge, J.M., Connell, W.F., Firstbrook, J. B., Mayer, G.A., and Wolfe, M.J.: Effects of certain vegetable and animal fats on plasma lipids of humans. J. Nutrition 56:311, 1955.

† Mono-enoic (mono-unsaturated) acid is presumably synonymous under these conditions with oleic acid and di-enoic (di-unsaturated) acid with linoleic acid

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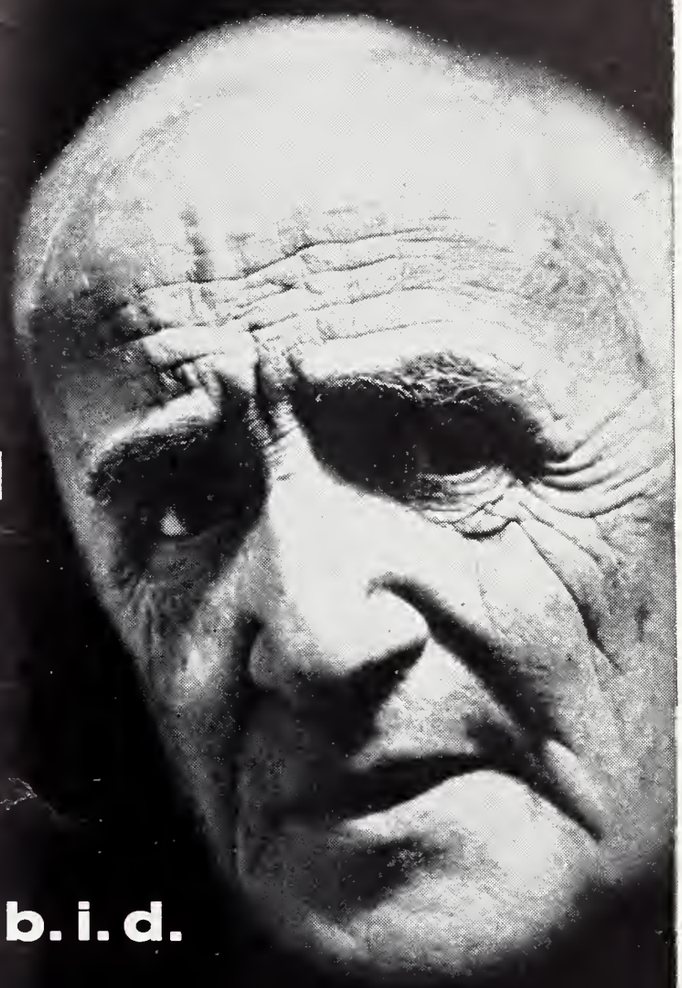

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LITERATURE / Continued

Motor Exhaust Gases and Lung Cancer in Cincinnati. C. A. Mills: American Journal of Medical Sciences 239:316, 1960, as reprinted condensed by Current Medical Digest 27:91-93 (June) 1960.

A survey of the greater Cincinnati area disclosed a high degree of mathematical significance between incidence of lung cancer and (1) cigarette smoking, (2) living in air-polluted or "clean" residential areas, and (3) driving mileage in urban traffic. Since only one in 65 among the general population was a subject of the survey, mortality calculations regarding lung cancer were not made. Conclusions of the study are, therefore, qualified in this connection as relative and for purposes of comparison only.

Unique in findings published are statistics on death frequency among white males by age decade against a background of residence area and miles driven annually. Those residing in the so-called basin area of Cincinnati who drove an automobile more than 12,000 miles per year were found to have a death rate as much as 100 per cent greater than those living in suburban and rural areas who operated automobiles less than 12,000 miles annually. Additionally, only 4 per cent of the sample were classified as heavy smokers.

Death hazard, as interpreted statistically, was observed to be greatest for those aged 40 and over. The study shows a quantitative mortality increase by age decade of near-geometric progression pattern. The author concludes that, on the basis of statistical evidence, "it seems clearly indicated that exposure in urban motor traffic is a significant factor in lung cancer incidence, that driving mileages above 12,000 miles per year are associated with a lung cancer hazard fully twice that of driving mileages below this level, and that this association must logically be related to the inhalation of motor exhaust products, either directly or after their atmospheric conversion to ozone or oxidant materials along the traffic stream."

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LITERATURE / Continued

Live Poliomyelitis Vaccine Status. Leroy E. Burney: Publ. Hlth. Rep. (Wash.) 74:983-984 (November) 1959.

(Statement by Leroy E. Burney, surgeon general, public health service, August 28, 1959, regarding the status of attenuated live poliomyelitis vaccines.)

The public health services committee on live poliovirus vaccine, headed by Dr. Rodrick Murray, chief of the services division of biologics standards has reviewed the rapidly accumulating data on the development and field use of attenuated live polio virus vaccines and reports as follows:

1. Three sets of attenuated poliovirus strains have been proposed for use as oral vaccines. The Sabin strains (Dr. Albert Sabin, University of Cincinnati) have all had extensive field trials in Eastern Europe, Mexico, and Singapore. The Lederle strains (Dr. Herald Cox, Lederle Laboratories) have been widely used in Latin America. The Koprowski type 1 strain (Dr. Hilary Koprowski, Wistar Institutes, Philadelphia) has been used in a large trial in the Belgian Congo. However, no significant amount of field information is available concerning Koprowski's type 2 strain, and only limited information is available in relation to his type 3 component.

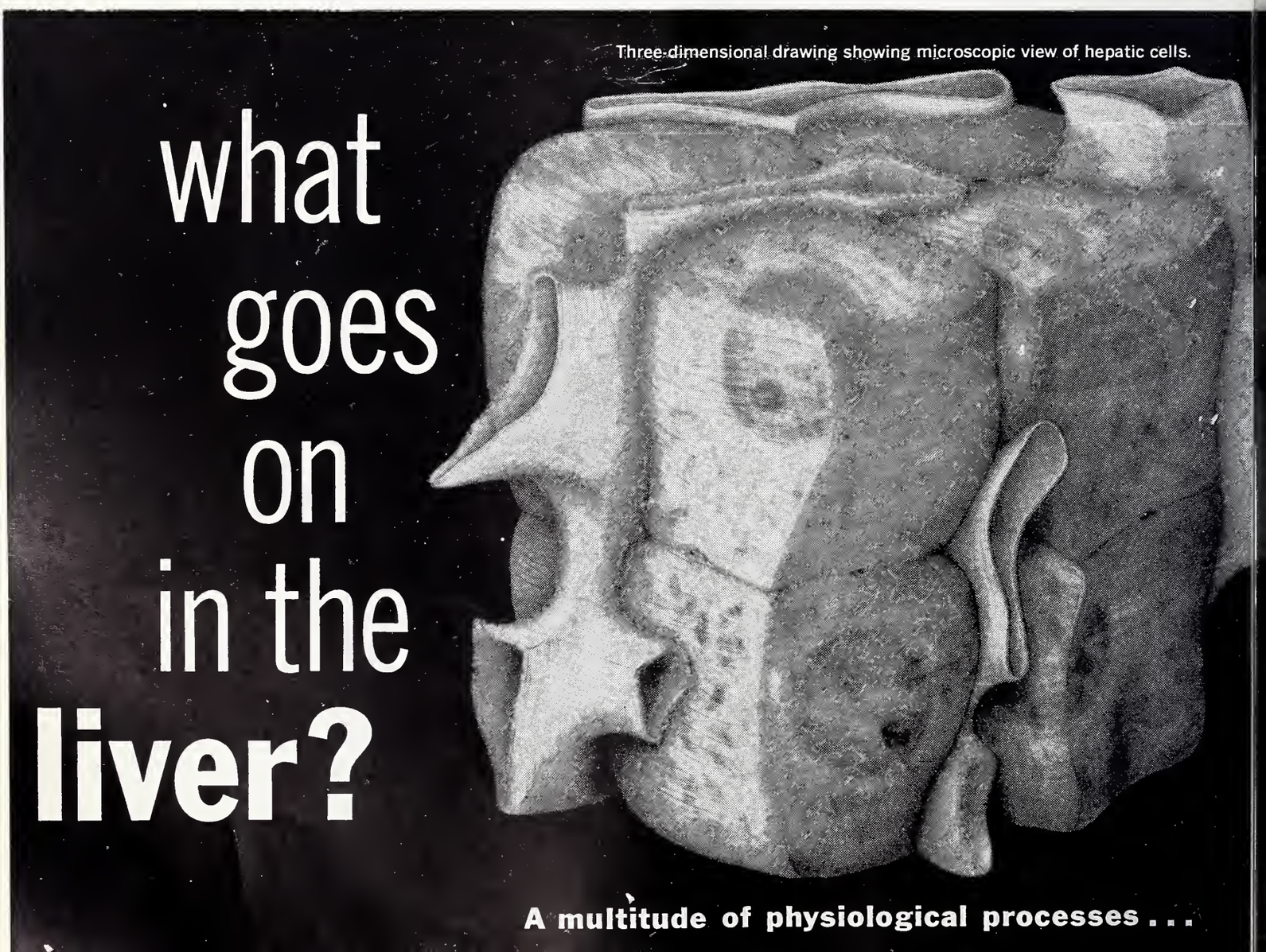
2. There is considerable difference in the neurovirulence or damaging effect on nerve cells for monkeys of the three sets of strains as determined by intrathalamic and intraspinal inoculation. On this basis, the Sabin group has an advantage over the others, but none of these strains is completely nonvirulent when inoculated into monkeys by the intraspinal route.

3. No evidence has been reported to indicate that any of these vaccines produced any harm to the individuals to whom they were administered. The thoroughness with which the observations were made has varied in different studies.

4. In some studies the ability of these strains to multiply and thus produce antibodies is less than could be expected on theoretical grounds. Apparently a number of factors operate in the field which may prevent alimentary infection and the subsequent development of immunity.

5. A number of workers have reported that virus excreted by vaccinated individuals has shown increased neurovirulence for monkeys. There is considerable disagreement among investigators as to the significance of these reversions in virulence.

6. Field experience with any strain to date cannot be interpreted as affording reasonable proof that



the community of nonvaccinated persons will be free of danger from possible reversion of virulence in excreted virus under a great variety of readily anticipated circumstances. This is one of the most important unresolved problems.

7. There is evidence which indicates that under some circumstances the simultaneous administration of all three types of virus may be effective.

Mrs. Price Heads East Miss. Auxiliary

Mrs. B. Joseph Price, Meridian, has been named president of the East Mississippi Medical Auxiliary for 1960-61. She succeeds Mrs. William Carter, also of Meridian.

Other officers are Mrs. Roy Stodard, vice president; Mrs. Joe S. Covington, treasurer; Mrs. Guy T. Vise, corresponding secretary, and Mrs. H. S. Rayner, recording secretary. All are from Meridian.

New committee chairmen are (from Meridian unless otherwise noted): Mrs. John Bryan, historian; Mrs. Norman Todd, Newton, parliamentarian; Mrs. W. M. Gillespie, nurse recruitment; Mrs. Wayne Sullivan, bulletin; Mrs. Ernestine Gilbert, DeKalb, Preventorium chairman; Mrs. Lamar Arrington, legislation; Mrs. A. B. Smith, romance and research; Mrs. Albert Bryan, Jr., American Medical Education Foundation; Mrs. J. M. Beeler, mental health; Mrs. Karl Stingily, Doctor's Day, and Mrs. Lowry Rush, Jr., reporter.

THE SEXTH SENSE

The psychiatrist was giving a personality test to a young male patient. He drew a circle on his desk pad and asked the patient, "What does this mean to you?"

"Sex," replied the patient.

Next, the psychiatrist placed a cross mark within the circle. "And what does this mean?"

"Sex, of course," responded the young man.

The physician regarded the patient gravely, "I'm afraid you have a pronounced obsession about sex."

"*Me* obsessed?" the young man said with amazement, "for pete's sake, who's been drawing the dirty pictures?"

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(equivalent to 2 cc. of paregoric)	

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ADULTS: Initially 1 or 2 tablespoons from four to six times daily, or 1 or 2 teaspoons after each loose bowel movement; reduce dosage as diarrhea subsides.

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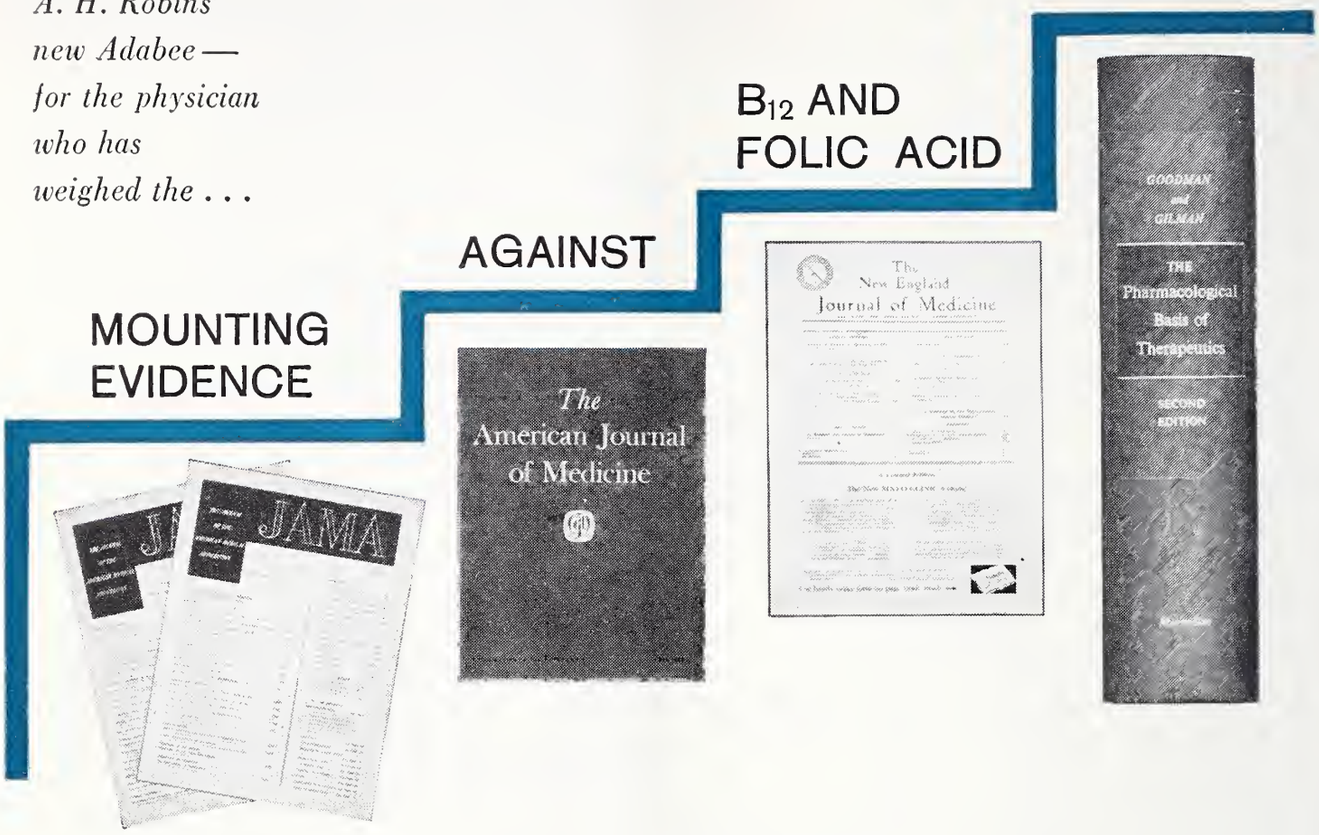
MOUNTING EVIDENCE AGAINST B_{12} AND FOLIC ACID IN MULTI-VITAMINS



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references: 1. Wintrobe, M. M., *Clinical Hematology,* 3rd ed., Phila., Lea & Febiger, 1952, p. 398. 2. Goodman, L. S. and Gilman, A., *The Pharmacological Basis of Therapeutics,* 2nd. ed., New York, Macmillan, 1955, p. 1709. 3. New Eng. J.M., Vol. 259, No. 25, Dec. 18, 1958, p. 1231. 4. Frohlich, E. D., New Eng. J.M., 259:1221, 1958. 5. J.A.M.A., 169:41, 1959. 6. J.A.M.A., 173:240, 1960. 7. Goldsmith, G. A., American J. of M., 25:680, 1958. 8. Darby, W. J., American J. of M., 25:726, 1958.

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Manganese	1.0 mg.	Phosphorus	80.0 mg.
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indications: As dietary supplements for the deficiency states that accompany pregnancy and lactation, surgery, burns, trauma, alcohol ingestion, hyperthyroidism, infections, cardiac disease, polyuria, anorexia, cirrhosis, arthritis, colitis, diabetes mellitus, and degenerative diseases. Also in restricted diets, particularly peptic ulcer, in geriatrics, and in concurrent administration with diuretics and antibiotics.

dosage: One or more tablets a day, as indicated, preferably with meals.

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A. H. ROBINS COMPANY, INC.
Richmond 20, Virginia

NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

September 1960

Dear Doctor:

Mississippi's business, agricultural, industrial, civic, and professional leaders have combined their powerful forces against political liberalism in the current presidential campaign. Declarations by the group against federal programs in education, medical care, minimum wage, Brannan-type farm subsidies, and urban renewal were voiced to congressional leadership last month.

> Joining forces were Farm Bureau, manufacturers and retail associations, Delta and Mississippi Economic Councils, and MSMA. Group supports H.R. 3, states rights bill; H.R. 10, Keogh plan; Boggs bill for political action freedom by organizations; and Abernethy agricultural research bill.

Man's best friend is nibbling the nation's medical budget with $5 million spent to treat 600,000 dog bites annually. U.S. Public Health Service says bites could be reduced 18 per cent if parents wouldn't give dogs to children under six. New studies are being made on bites and diseases transmitted from dog to man.

Almost a million Mississippians are covered by some form of voluntary health insurance with a five per cent increase over 1959 achieved through August. So says the Health Insurance Institute, reporting 959,000 individual and group contracts now in force among Mississippians. National figure is 128 million, 72 per cent of total population.

New AMA requirement for x-ray technologist training accreditation is two years under direct supervision of a radiologist. Recently revised program has blessings of American College of Radiology and American Society of X-Ray Technicians. Although extended curriculum isn't mandatory until 1962, most schools have or are converting now.

At least two socialized care nations are experiencing tragic adversities in maternal mortality rates. Newsweek says "inefficiency...is keeping the maternal death rate in England at double what is excusable...." and rate in West Germany is 1,137 per 100,000 births. British obstetricians get about $21 for delivery but German physicians, only enough to buy new shoe soles.

Sincerely,

Rowland B. Kennedy
Executive Secretary

Cosmetic Industry To Swing Toward Health Pitch

New York - Medicine has tongue in cheek over cosmetic industry's new trend toward "charmaceuticals" sales pitch on "preventive" rather than "corrective" preparations. Spokesmen predict that new products will be backed up by substantial research, what with Food and Drug Administration cracking down on advertising practices. Industry is exhorting toiletries makers to soft pedal product claims.

Hypnosis In Athletics Condemned By AMA

Chicago - AMA's Committee on Medical Aspects of Sports and Committee on Hypnosis recently condemned use of hypnosis in athletics as "dangerous and unsportsmanlike." Statement asserted that hypnotized athletes may aggravate physical impairments, ignore safety training, or become exhausted to point of harm by exceeding limits of physical ability. Copies of joint statement are available to physicians, coaches, and school leaders from AMA.

Physicians Warned Of Danger In Kelly-type Wills

Philadelphia - Attorneys aren't laughing at the do-it-yourself will of the late John B. Kelly, father of Princess Grace of Monaco, and doctors are warned against hazards of homemade postmortem literary classics. Such wills usually aren't in proper form and could be denied probate. Jokes and jibes can be bases for libel against estate and tax savings lost. Says one lawyer: "The humor of the testator may be wasted on all but the Treasury Department and Mr. Kelly may have laid the biggest brick of his career."

P & G Wins American Dental Association Accolade

Chicago - Procter and Gamble's Crest became the first dentifrice to win the American Dental Association's nod as "an effective decay preventing agent" but endorsement was accompanied by warnings and qualifications. Actually, frowns from dentists have been aimed at "Look, Mom, no cavities" advertising which ADA's Council on Dental Therapeutics calls a gross exaggeration. Cautions ADA: Any toothpaste is at best only an aid in decay prevention.

German Communists Dislike 'Father Bank'

Washington - Even the East German communists resent the people's new "father bank" opened by government at Dresden under the thin excuse of guaranteeing survival of the race in event of nuclear war. Spermatozoa from "physically perfect and intellectually elite" males is stored under refrigeration for so-called emergencies but real purpose is further breakup of family in communist society. Most Germans recall Hitler's legensborn program to produce "perfect Aryans," the chief result of which was 250,000 illegitimate children.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
September 1960, Vol. I, No. 9

Diverticular Disease of the Colon

DeWITT T. BROCK, JR., M.D.
and JACK V. KING, M.D.
Jackson, Mississippi

Innovations in the last decade have made possible a more aggressive approach to the management of diverticular disease of the colon. The author suggests that surgical treatment before development of complications should reduce incidence, prolonged hospitalization, extended morbidity, loss of time from occupation, and expense. Complications requiring surgical intervention are discussed and four cases presented.

WITHIN THE PAST DECADE, a more aggressive approach to the treatment of diverticular disease of the colon and its complications has been urged by numerous authors. Prior to the availability of the antibiotics, blood banks, improved anesthesia, a vastly more capable surgical and chemotherapeutic armamentarium, the mortality rate for colon surgery was so high as to demand conservatism. This is no longer true, however, and a more aggressive approach to this disease is both feasible and logical.

PERCENTAGES

Diverticular disease with its attending complications is becoming more common with the increasing life span. The exact incidence is impossible to determine, but it has been estimated that it is present in 5 per cent of the population over 40 years of age, 20 per cent of whom will have complications, and 20 per cent of these will require surgery.

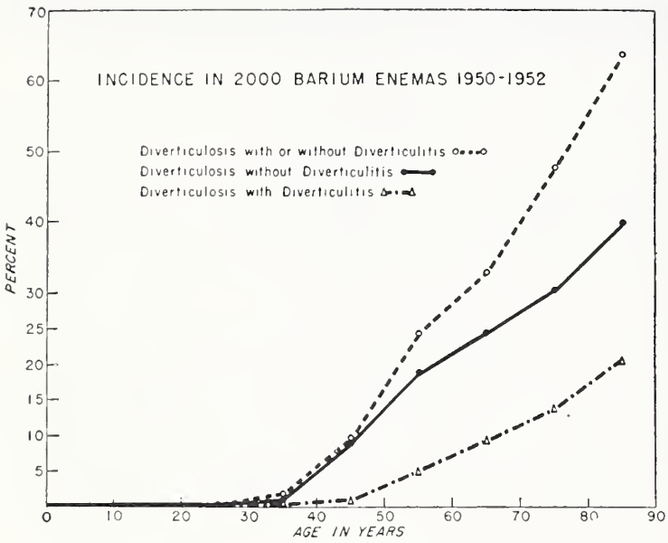
Welch et al.[1] reviewed 2,000 consecutive colon x-rays over a three year period and found that there was a steady increase in frequency from age 35 so that at 85, diverticula could be demonstrated in approximately two-thirds of the patients. Although the incidence of diverticulitis lagged somewhat, a progressive increase with age was demonstrable. Thus, in the sixth decade, approximately one-fifth of all patients with diverticulosis demonstrated evidence of diverticulitis, while in the ninth decade the incidence had increased to one-third. Overall, diverticulosis is demonstrated in a third of all patients having colon x-rays, and diverticulitis in 8.9 per cent.

COMPLICATIONS

Diverticulosis *per se* requires no treatment. Only when diverticulitis ensues is treatment indicated, and then most cases can be successfully managed medically. The complications which occur and warrant surgical intervention are:

Read before the Section on Surgery, 92nd Annual Session, Mississippi State Medical Association, Jackson, May 10-12, 1960.

1. Recurrent acute diverticulitis
2. Perforation with abscess formation, or free perforation with peritonitis
3. Obstruction
4. Fistula formation
5. Inability to distinguish from malignancy
6. Hemorrhage



Of 114 cases reported by Welch et al.[1] the indications for resection were as follows:

Diverticulitis	38 per cent
Perforation	27 per cent
Fistula	10 per cent
Obstruction	20 per cent
Bleeding	5 per cent

Preoperative diagnosis was cancer in 18 per cent of this total.

Judd and Mears[2] reported the following indications in 68 cases of resection:

Question of malignancy	18 cases
Recurring attacks of diverticulitis	17 cases
Fistula	15 cases
Extrarectal mass	11 cases
Obstruction	4 cases
Incidental operative finding	2 cases
Persistent severe diverticulitis	1 case

RECURRENT DIVERTICULITIS

There is agreement generally that surgical intervention is the treatment of choice in all of these complications except in those with recurrent diverticulitis without other demonstrable complications. Advocates of conservative treatment feel that these cases should be managed medically until further complications develop. Unfortunately, there is no way to predict which patients will develop complications, and yet it is this group which should command our attention, if we are to reduce the morbidity and mortality from this disease. It is this group where one stage resections can be done with little morbidity and mortality as opposed to the prolonged hospitalization, absence from work, and expense connected with staged procedures. Logically, the longer symptoms persist, the more frequently serious complications will occur. Waugh and Walt[3] reported one death in 93 patients undergoing one stage resection (this from a bleeding duodenal ulcer) as opposed to a rate of 4.1 per cent in 220 patients undergoing multiple stage procedures.

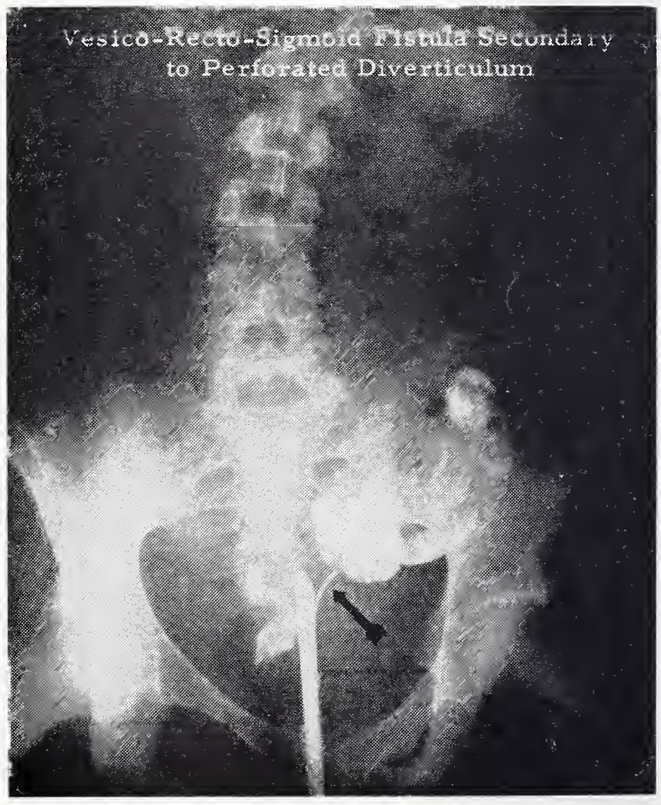
CRITERIA FOR RESECTION

Welch[1] proposed the following criteria as an aid in selecting patients with uncomplicated diverticulitis for resection in order to forestall further complications.

1. Patients who have repeated attacks of diverticulitis while on a good medical regimen. If they continue to have repeated attacks of cramps, diarrhea, bloating, tenesmus, or low back pain, resection is advised.

2. Diverticulitis appearing in patients under 50 years of age. Evidence indicates that this disease in young people is more severe than in the older ages. For example, while only 6 per cent of all observed cases of diverticulitis occurred under 50 years of age, of those who required resection 18 per cent were under 50. Also, increasing age will lead to more diverticulitis.

3. Patient's demonstrating severe, persistent, deformity of the sigmoid on x-ray. Such changes



represent organic change rather than spasm and furnish a definite prognosis of serious complications.

4. Patients who develop urinary symptoms in the presence of diverticulitis. This is frequently the warning of an impending fistula.

PERFORATION

Perforation usually results in a localized peritonitis which may or may not progress to abscess formation. Treatment with the antibiotics will usually result in resolution without operative interference, and one stage resection can be done later. Still there are cases where abscess formation occurs and requires drainage. At the same time the safest course is to do a complementary transverse colostomy, though some advocate merely drainage of the abscess. Resection should then be done in a period of six weeks to three months.

Free perforation with generalized peritonitis is fortunately much less common than localized perforation. Arnheim[4] reviewed 834 cases of surgically treated diverticulitis and found that 19 per cent of the cases had abscess formation, 12 per cent localized peritonitis, and only 2 per cent free perforation. Treatment of this condition depends on the factors presenting themselves at surgery. Primary closure of the perforation may be done if the surrounding colon is not edematous and friable. Usually, the surrounding inflammation and adhesions to the omentum and intestine preclude this procedure, and either exteriorization or drainage with a complementary transverse colostomy is advisable. The peritoneal cavity should be irrigated thoroughly with saline prior to closure and antibiotics and supportive measures given postoperatively. Definitive resection should then be done in six to 12 weeks.

OBSTRUCTION

Obstruction, which is often difficult to distinguish from carcinoma, is usually partial and is due to stricture formation from repeated bouts of inflammation and the edema associated with an acute exacerbation. It usually responds to antibiotics, suction, and intravenous fluids, though colostomy is sometimes necessary. Small bowel obstruction must also be suspected in these cases and not overlooked. Resection of the involved colon should of course be done subsequently.

FISTULA FORMATION

Fistulae occur from the perforation of peridiverticular abscesses into the bladder, vagina, other intestine, abdominal wall, or other adjacent viscera. Treatment of this complication is usually best done in three stages, though selected cases can be done in one stage.

HEMORRHAGE

It is now widely accepted that diverticular disease of the colon is a source of hemorrhage from the bowel. Within the past few years, numerous reports have appeared to substantiate this fact, though there have been some which call attention

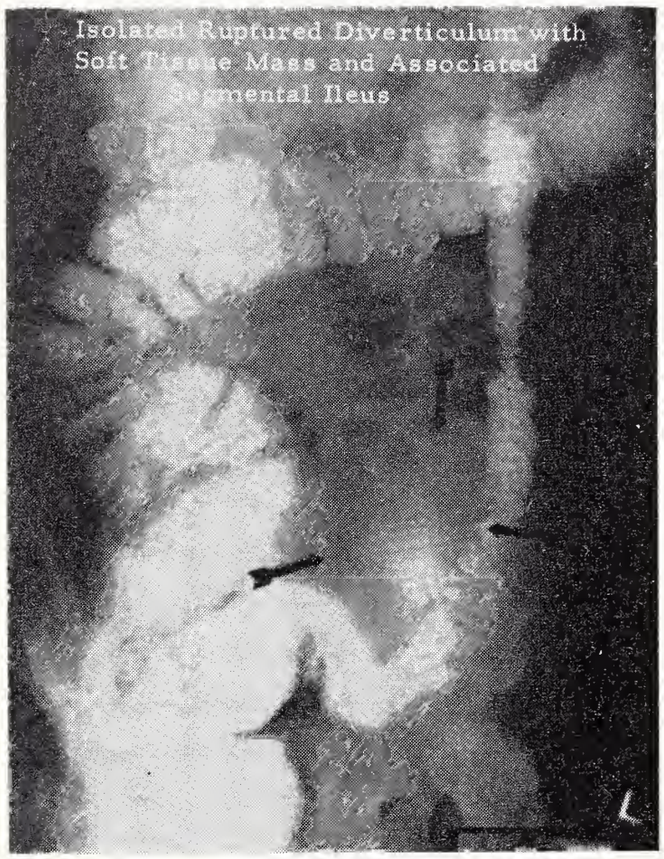
to the probability of polyps or other lesions being the source of bleeding rather than the diverticular disease. As a general rule, massive hemorrhage is more likely to be from diverticular disease, whereas repeated small amounts of blood passed per rectum would tend to indicate the presence of polyps or carcinoma in association with diverticular disease.

Where massive hemorrhage occurs, it can be treated conservatively as a rule with replacement of blood loss, antibiotics, and other supportive measures. Rarely, the bleeding will be so profuse as to require emergency surgery. This is complicated in that there is often widespread diverticulosis throughout the entire colon and total colectomy may be necessary.

Should the patient with massive bleeding and a localized area of diverticulosis respond to conservative measures, then later resection of the involved area would seem logical. In the case of diverticular disease of the entire colon, the patient should be followed closely. If further bleeding of consequence occurs, then colectomy should be done.

Fortunately, this will not be necessary in the majority of cases.

In those cases where small amounts of blood are repeatedly passed per rectum and proctoscopy and repeated colon studies for lesions other than diverticular disease are negative, exploration and



resection seem advisable, since there is a probability of polyps or carcinomas being the source of bleeding rather than the diverticular disease.

Four case reports illustrate some of the complications and problems associated with their management.

CASE REPORT 1

F. H., 50-year-old colored male, was admitted to the Baptist Hospital in Jackson on December 5, 1959, with massive rectal bleeding. His stool was maroon colored. The patient received multiple whole blood transfusions and general supportive therapy, including Sulfasuxidine. Proctoscopic examination was essentially negative. Barium enema with air contrast studies revealed diffused diverticular disease of the colon. The patient seemed to be responding to conservative management until December 11 when he developed signs of acute generalized peritonitis. The patient was taken to surgery on that evening, and an exploratory laparotomy was carried out. There was definite generalized peritonitis present and there was a perforated diverticulum in the sigmoid colon with a pericolic abscess present which had also ruptured, producing the generalized peritonitis.

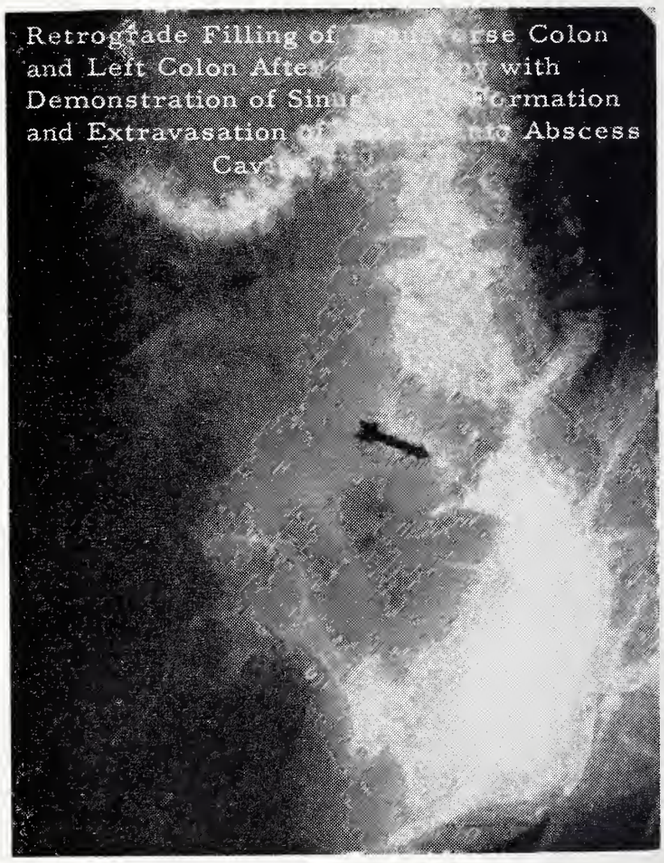
The abdominal cavity was irrigated with large amounts of saline solution and a right upper quadrant transverse colostomy was performed. The pericolic abscess was drained and a 18 French catheter with multiple perforations was brought through a separate stab wound in the left lower quadrant of the abdomen and connected to low suction. One gm. of Streptomycin and one million units of penicillin in 10 cc. of saline were instilled intraperitoneally. The patient's postoperative course was essentially uneventful and he was discharged from the hospital on December 24.

The patient was readmitted to the hospital on February 25, 1960. A left colectomy was performed. Because of the difficulty in accomplishing end-to-end anastomosis, closure of the colostomy at that time was deemed inadvisable. The patient's postoperative course was essentially uneventful, and he was discharged from the hospital on March 13.

The patient was readmitted to the hospital approximately six weeks after the left colectomy. A proctoscopic examination revealed the suture line to be intact. The transverse colostomy was closed and the patient's hospital course was essentially uneventful.

CASE REPORT 2

M. P. W., 41-year-old white female, was admitted to the Baptist Hospital in Jackson, on March 26, 1958, complaining of cramping lower abdominal pain. Abdominal examination revealed some tenderness in the left lower quadrant of the abdomen. Pelvic examination revealed a mass in the left adnexal region. Proctoscopic examination was essentially negative. Colon x-ray with air contrast studies re-

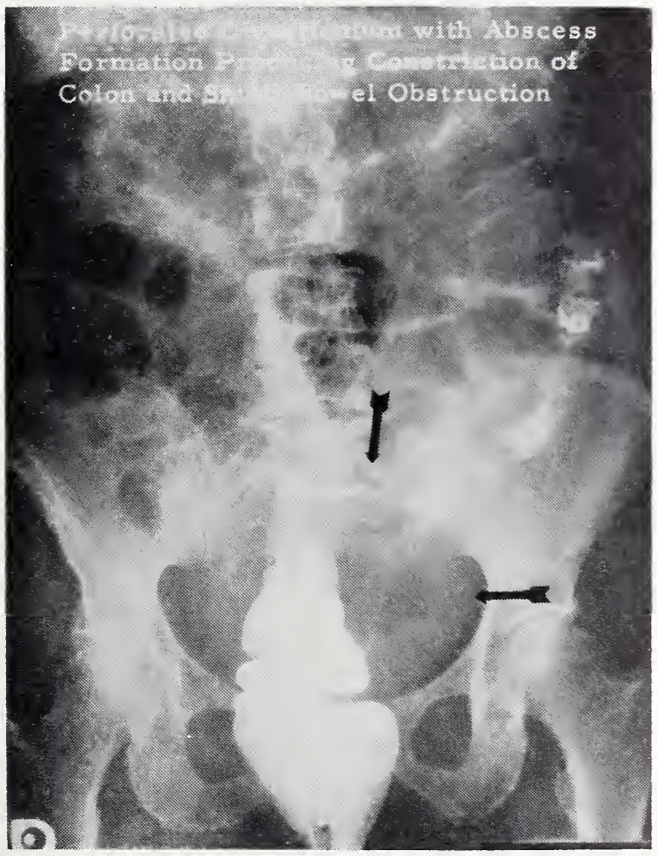


vealed no evidence of disease. A gynecological consultation was requested, and the gynecologist felt that the patient had a mass in the left adnexal region. However, the possibility of a ruptured diverticulum with abscess formation was also mentioned. Sulfasuxidine was prescribed and on April 4 an exploratory laparotomy was performed.

At surgery the left adnexal mass was found to be a ruptured isolated diverticulum of the rectosigmoid with abscess formation. A segment of the ileum had adhered to the mass. An anterior resection and an end-to-end anastomosis was carried out without difficulty. The patient's postoperative course was essentially uneventful and follow-up colon x-ray and proctoscopic examinations were within normal limits.

CASE REPORT 3

W. W. H., 64-year-old white male, was admitted to the St. Dominics Hospital in Jackson, on January 24, 1954, with profuse rectal bleeding. The stool had been maroon colored for approximately eight days. The patient received multiple whole blood transfusions and general supportive measures. A proctoscopic examination was negative with the ex-



ception that maroon colored blood was seen at the end of the scope at the 25 cm. level. Colon x-ray revealed diffuse diverticular disease involving the entire colon. Sulfasuxidine was given and the multiple whole blood transfusions continued. Rectal examination revealed prostatic hypertrophy.

On the night of January 27 the patient went into shock, passed a large maroon colored stool and was taken to surgery. Exploratory laparotomy was performed. The entire colon including the cecum was found to be filled with blood. However, there was no blood in the small bowel. A total colectomy was carried out, and a ileorectostomy with an end-to-end anastomosis was done. Examination of the specimen

after surgery revealed diverticular disease throughout the entire colon.

The postoperative course of the patient was quite satisfactory, and he was discharged from the hospital on February 7 on the 11th postoperative day.

The patient has done well since that time and at present, he is having one or two soft stools daily.

CASE REPORT 4

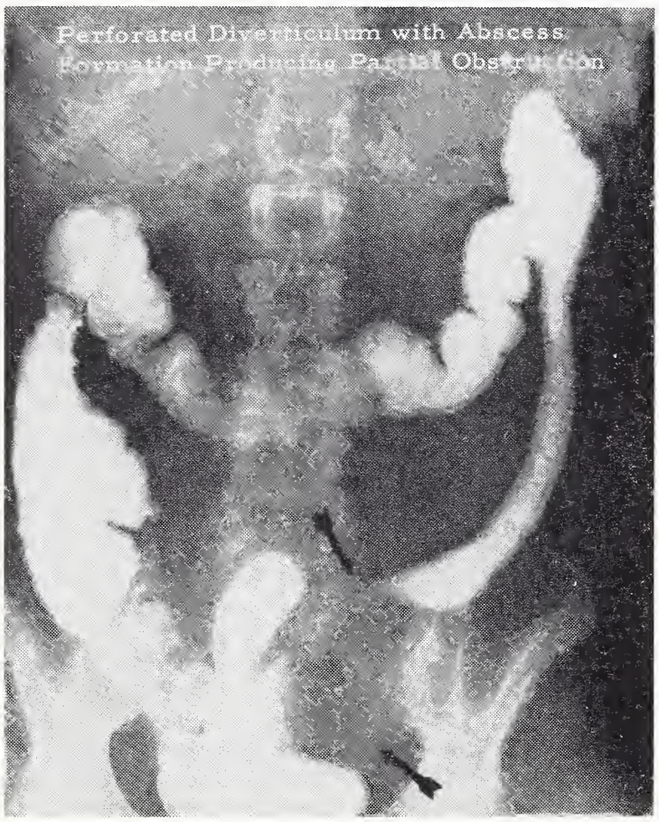
J. B. U., 52-year-old white male, was admitted to St. Dominics Hospital in Jackson on September 8, 1959, with a diagnosis of diverticulitis of the sigmoid colon with perforation and abscess formation. The chief complaint at this time was abdominal cramping pain. This patient has had recurrent bouts of diverticulitis for several years, and he had been advised to have colon resection repeatedly.

Abdominal examination revealed a large mass in the left lower quadrant of the abdomen. The patient was given large doses of antibiotics including Chloromycetin and Streptomycin intramuscularly as well as intravenous fluids to correct his dehydration. He seemed to be improving until September 13 when he began having more severe cramping abdominal pain. An examination of the mass in the left lower quadrant revealed no decrease in its size.

On September 14 he was taken to surgery and laparotomy was performed. The pericolic abscess of the sigmoid colon was drained and a transverse colostomy in the right upper quadrant of the ab-

domen was accomplished. The postoperative course was essentially uneventful and he was discharged from the hospital on September 26, the 10th postoperative day.

The patient was readmitted to the St. Dominics Hospital on November 9. Barium enema of the distal and proximal loops of the colostomy revealed multiple diverticula throughout the entire descending colon.



The transverse colon down to the splenic flexure appeared to be free of diverticula as did the colon proximal to the colostomy. The bowel was prepped with Sulfasuxidine before readmission. A left colectomy was performed on November 11 and an end-to-end anastomosis of the descending colon just below the splenic flexure and rectum was done. The postoperative course was essentially uneventful and he was discharged from the hospital on November 19.

The patient was readmitted to the hospital on December 13 for closure of his colostomy. His hospital course was essentially uneventful and he has done well since this time.

SUMMARY

A résumé of diverticular disease and its complications has been presented. It is suggested that more aggressive surgical treatment of this disease before development of complications should reduce both incidence and prolonged hospitalization, extended morbidity, loss of time from occupation, and expense.

Four case reports have been presented to illustrate some of the complications of this disease and definitive treatment. ★★★

1151 North State Street

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PLEASE DON'T ANNOY THE SPORTS CARS

Owners of small, open sports cars are having their animal problems. In New York State park a frightened deer jumped into the path of a European car, causing injury to the driver. The injury: a hoof mark on the driver's head. And in Jackson, Miss., both man and dog were surprised, but unharmed, when a large collie chasing a small convertible took one leap too many and suddenly found itself back seat driving.

School Examinations

JIM G. HENDRICK, M.D., and NOEL C. WOMACK, JR., M.D.
Jackson, Mississippi

More and more cities are coming to require the preschool examination. Pediatricians Hendrick and Womack discuss immunizations, physicial examination, and laboratory studies in this timely article. Emotional development and sex education are also considered.

THE VALUE OF school examinations depends upon the physician. It can and should be a special examination for three reasons: (1) to see if the child is physically fit in order that he may learn to the best of his ability, (2) to appraise his emotional development and readiness for school, (3) to impress upon the parents and the child the need of regular checkups, at least one a year. This is especially true of the preschool checkup when the child is being prepared for the most important event of his life—starting to school. On the other hand, if the physician treats the visit as routine, troublesome, or unimportant, he is guilty of neglect of his patient and his duty.

In some towns and cities a preschool examination is required before entry. Physicians should encourage the adoption of this requirement in all localities.

IMMUNIZATIONS

The question uppermost in the child's mind is, "Do I have to take a shot?" So let us answer that first.

The following schedule is recommended for the active immunization of infants and children by the American Academy of Pediatrics in 1960:

Age	*Preparation*
1½ - 2 months	D. P. T. Polio Vaccine*
3 months	D. P. T. Polio Vaccine
4 months	D. P. T. Polio Vaccine
10 - 12 months	Smallpox Vaccine
12 - 18 months	D. P. T. Polio Vaccine
3 - 4 years	D. P. T. Polio Vaccine
5 - 6 years	Smallpox Vaccine
8 years	D. T. (adult type) Polio Vaccine
12 years	D. T. (adult type) Polio Vaccine
16 years	D. T. (adult type) Polio Vaccine

* Polio vaccine for primary immunization of infants may be given as a separate injection or in a commercially-prepared quadruple vaccine with D. P. T. Note that vaccination for smallpox is recommended before the first year (to lessen the danger of serious reactions) and again by school age. The second vaccination usually produces an immune reaction without symptoms.

In properly evaluating the health of school age children, consideration of the physical condition occupies the bulk of the attention. Measurements of growth as expressed by the height and weight are of particular importance. These should be performed and recorded to determine the possible deviation from the average, and also the maintenance of proper steady growth. Any marked deviation, or evidences of interference with normal growth should be investigated to determine the possibility of a disease process. Conversely, failure to do well in school should first be evaluated to rule out physical abnormality.

As a specific example, failure to grow or to do well in school suggests the possibility of hypofunction of the thyroid gland. Myxedematous skin changes, constipation, drowsiness, and mental decline are symptoms which may indicate acquired hypothyroidism. Some children may have only partial functioning glands that cannot maintain normal growth and development beyond a limited time. A laboratory screening test such as the protein-bound iodine determination will be helpful in ruling out such a disorder.

GENERAL NUTRITION

Careful attention to the general state of nutrition is of primary importance. Even in this "land of plenty" with the best opportunity in the world for good nutrition, there is an appalling disregard of proper eating. Our materialism is particularly expressed in reward for children by some form of

sweets even for things that they normally are expected to do. Poor eating habits are the rule rather than the exception. These failings coupled with a definite lack of proper exercise have resulted in an actual lowering of the physical fitness of our children. This should be particularly noticed at school age, but in reality should be prevented in infancy and preschool age groups by proper diet and hygiene. A careful comprehensive physical evaluation should be done. Some systems deserve special considerations.

VISUAL ACUITY

The visual acuity should be checked at yearly intervals. This can best be done with a Snellen E chart. The child should stand 20 feet from the chart, and adequate lighting should be provided—50 watts in a floor lamp. This test will adequately screen children for myopia which is the most common refractory error in this age group. Children under 8 years of age may have 20-30 vision, and over 8 should have 20-20 vision. Farsighted children may be screened by using a convex lens of plus 1.5 diopters. This is held a short distance in front of the eye and the child requested to read the chart. Hyperopic children will be able to read the chart as well with the lens as without. The vision of a normal child will be blurred by the lens because he cannot compensate for it.

Examinations for latent ocular muscle imbalance or phoria can be done with the "cover test." With one eye covered, the child is requested to fix his vision on an object. If sudden removal of the card results in movement of the eye that was covered, then phoria is suggested, and ophthalmological evaluation is indicated. The presence of strabismus also makes ophthalmological evaluation mandatory.

HEARING TESTS

Evaluation of hearing can only be tested accurately with a pure tone audiometer. The intensity is set at 15 or 20 decibels and the ears tested separately. Tones of every frequency should be heard at 20 decibels, or no more than two tones missed at 15 decibels.

Ideally, this test should be done on all children, and this is best done on an individual level. Mass testing is done in many areas, and probably is the most practical means of reaching all children. Particular attention should be given to children with a history of repeated ear infections, apparent hearing loss or adenoid enlargement.

Examination of the teeth receives much emphasis at school, but cannot be overemphasized. The physician can play a very important part in dental health by checking children for poor hygiene, caries, and malocclusion. Parents should be urged to obtain dental care for their children regularly and insist on proper care of the teeth at home.

TONSILS AND ADENOIDS

Tonsillar and adenoid disease is a most common finding. In addition to assuming the burden of primary protection, these structures are at the height of their development at this age. Such evidences of marked obstructive phenomenon as hearing disturbances, adenoid obstruction with mouth breathing or signs of chronic infection are definite indications for surgical removal of these structures. Though this procedure has probably been overpracticed in the past, the results of this treatment, when indicated, are most gratifying.

The heart should particularly be examined for the presence of murmur or enlargement. Any deviation from normal may indicate undiagnosed congenital heart disease or the presence of a rheumatic process, and indicate more complete investigation.

Recording of the blood pressure should be done regularly. The selection of the proper sized cuff is most important, as a cuff too large produces a reading that is too low, and vice versa. The correct size is represented by one half the distance between the shoulder and the elbow.

Any child who has a systolic blood pressure consistently over 120 mm. Hg must be examined for disease of the kidney, adrenals, or cardiovascular system.

Special evaluation of the posture is indicated at this time. Attention should be given to any evidence of scoliosis or disorder of the feet and any necessary corrective procedures instituted promptly. Complaints of bone or joint pain should be investigated for aseptic necrosis as these children are particularly susceptible to this condition.

LABORATORY STUDIES

Extensive studies are not necessary, but the following are recommended.

1. Hemoglobin determination. Values below 80 per cent or 11.2 gm. are considered subnormal and iron (such as tablets or Elixir Ferrous Sulfate) is needed. Iron deficient diets and lack of vitamin C are the most common cause. A stool examination for blood and parasites and ova should be done on anemic children.

2. Urinalysis. Specimen from females should be catheterized or caught "clean," that is, after cleansing vulvae and irrigating introitus. Specimen should be caught after urination has begun. Albuminuria may be transient or orthostatic but can indicate renal disease that has been completely asymptomatic. Glycosuria, pyuria, and hematuria should be appropriately investigated.

3. Pinworm smears. These should be made if there is history of recurrent, vague abdominal pain especially in the mornings or at mealtimes, itching at the anus, or irritability during the day or restlessness at night. If ova are demonstrated on the smears or if the symptoms are present even without a positive smear treatment, piperazine or Povan should be given.

4. Stool examinations for ova parasites. These examinations are usually negative since hygiene is constantly improving. Roundworm infestation is the most common (other than pinworms), but is usually diagnosed when worms are passed.

5. Tuberculin test. The intradermal tuberculin test is most reliable and the intermediate strength is recommended. The test is read after 24 hours and up to 96 hours. Positive tests should be studied for activity—leucocytosis, increased sedimentation rate, or x-ray evidence. All close contacts and family members should be checked to determine, if possible, the source of the infection.

6. P. B. I.—The protein-bound iodine is a reliable test of thyroid activity which should be done if thyroid disease is even suspected.

An alert physician can detect evidence of emotional trouble. At the preschool examination, signs of overprotection should lead to further inquiry and discussion. It is never too late to begin remedial treatment, but it must be recognized by the parents. A tense, apprehensive child should be watched for symptoms after school begins, such as stomach-ache or vomiting or refusal to leave home. Short courses of a tranquillizer are quite beneficial and safe during these emotional crises. A spoiled or indulged child may not be able to accept responsibility. A child who lacks real love and appreciation by his parents may be a disciplinary problem for the teacher.

SEX EDUCATION

This is not a lecture or a book but a continuous process of education from infancy on. The parent should be ready for all questions the child may ask. Some parents will find books such as *Growing Up* by Kark de Schweinitz, or *The Wonderful Story of How You Were Born* by Gruenberg helpful for the 5 or 6 year old. The libraries and book stores have excellent books for parents and children of all ages concerning sex education.

SUMMARY

The physician has the opportunity to help develop the habit of regular checkups and to prove the importance of school examinations by his attitude and the thoroughness of his work. More important, if properly done, he can feel that he is insuring that each child he examines is physically and emotionally fit for his heritage of equal opportunity for education. ★★★

906 North State Street

TO END IT ALL

While driving one evening, a New York psychiatrist spotted a man high up on the girders of the Manhattan Bridge. Stopping his car quickly, the doctor carefully approached and summoning every professional skill, pleaded with the man to come down. When the lonely figure had descended, the physician asked, "Why did you do it?"

"Because it's my job, doggonit," was the vexed reply. "I'm a bridge inspector with the Department of Public Works!"

The Diagnosis and Treatment Of Abruptio Placenta

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When abruptio placenta, premature detachment of a normally implanted placenta, occurs before the 20th week of gestation, the signs, symptoms, and treatment are usually similar to those in abortion. Occurring after the 20th week, however, it is a serious complication with a high fetal mortality rate. Two series of cases involving abruptio placenta are presented and compared. The authors conclude that fetal survival rate and incidence of maternal complications are associated directly with the degree of abruption and are influenced to a lesser degree by the elapsed time from placental separation to delivery.

ABRUPTIO PLACENTA, premature separation of the normally implanted placenta, accidental hemorrhage, or ablatio placenta is a serious complication when it occurs after the 20th week of gestation. Although abruption may be present prior to the 20th week of gestation, the complications usually are not severe and the signs, symptoms, and treatment are similar to those of an abortion. Previously, 100 consecutive cases of abruptio placenta were reviewed and reported.[1] This study showed a cesarean section rate of 3 per cent and a fetal survival rate of 32 per cent. Thus a decided effort to increase our fetal salvage rate was made and it had been hoped that another series of abruptio containing 100 cases could be used for comparison, but as of now, only 92 cases are available for analysis and study. However, certain definite conclusions can be reached from a comparison of these two series.

ETIOLOGY

The theory most accepted to explain abruption associated with toxemia of pregnancy is degeneration and spasm of arterioles in the decidua basalis.[2] McKelvey[3] has shown that even in a normal placenta at term, there is great dilatation of the terminal portion of the arterioles with loss of the endothelial lining and replacement of the wall with a fibrinoid material. Excess decidua arteriolar spasm, presumably associated with toxemia of pregnancy, accelerates the degeneration with necrosis of the vessels and surrounding tissue leading to necrosis and hemorrhage into the decidua basalis.

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The hemorrhage may be small resulting in a white infarct, or large with splitting of the decidua. This may continue with further separation of the placenta, breaks into maternal vessels and sinuses, until the picture of abruption with uterine tetany or apoplexy is present. Therefore, in toxic abruptio placenta, it is the afferent maternal blood supply which is at fault.[2] It appears that total placental separation and concealed hemorrhage are more frequent with toxic abruption. Thus it is associated with a higher fetal and maternal mortality.[4]

NONTOXIC ABRUPTION

This degenerative arteriolitis theory does not explain the usual events that occur in the 31 per cent to 91.2 per cent of the patients that do not have toxemia of pregnancy. Nontoxic abruption is more often partial and there is a higher maternal and fetal salvage, particularly the latter. Also the

fact that it is not a violent abruption suggests that it usually begins near the periphery of the placenta and is perhaps of venous origin.

ANIMAL STUDIES

Nesbitt et al.[5] produced placental abruption in 35 of 44 pregnancies in six adult mongrel dogs by ligation of the inferior vena cava just below the renal veins but above the right ovarian vein. Howard and Goodson[6] likewise produced placental abruption in dogs. The ligations result in an increase in hydrostatic pressure which may cause mechanical rupture of the decidua sinuses and placental abruption. Also, there may result hypoxia, or anoxia, with damage to the decidual vessels, hemorrhage, and resulting abruption.

Smith and Fields[2] report a case of the supine hypotensive syndrome initiating partial abruptio placenta. Their concept is that the rupture of maternal venous sinuses was due to increased venous pressure caused by pressure of the flaccid uterus on the inferior vena cava. The difficulty is that the placenta was circumvallate and peripheral separation is more frequent. One cannot be certain that the marginal abruption was initiated by the hypotensive syndrome, perhaps the reverse was true.

CLASSIFICATION

Maternal and fetal progress, as well as the method of treatment, varies markedly with the severity of the disease. Abruptio placenta have been classified by various methods as to whether they were mild, moderate, or severe. Another classification is whether toxemia was associated with the abruption or not, namely toxic or nontoxic. We agree with Page[7] that a clinical classification according to recognizable maternal symptoms has much to be desired over other methods of classification.

Page's system of grading severity is a follows:

Grade 0—These are clinically unrecognized before delivery. (Diagnosis is based upon examination of placenta.)

Grade I—These show external bleeding only, or mild uterine tetany, but no evidence of maternal shock.

Grade II—In this group there is uterine tetany, ordinarily with uterine tenderness, possibly external bleeding, fetal distress (or death), but no evidence of maternal shock.

Grade III—Here there is evidence of maternal shock or coagulation defect, uterine tetany, and intrauterine death of fetus.

In our first series of cases, Grade 0 was not considered. The breakdown of the series is as listed in Table I.

TABLE I

GRADE OF ABRUPTIO PLACENTA

Grade	0	I	II	III
Series A	0	37	38	25
Series B	10	20	34	28

It is quite apparent that there was an increase in the severity of abruption in Series B. The problem of grading patients with abruptio placenta, according to the degree of severity, is not always simple. There is frequently room for individual differences and interpretation of severity of a given case; but with a high percentage of patients showing uterine tetany, fetal distress or fetal death, maternal shock, and/or coagulation, defect grading was not a difficult problem. It was only an occasional case that presented a problem in grading, and this usually involved whether or not there was evidence of maternal shock without fetal death or fetal distress.

DIAGNOSIS

Abruptio placenta is characterized by pain, vaginal bleeding, uterine tetany, fetal distress or death, and maternal shock. Grade II or Grade III abruption is usually easy to diagnose whereas Grade I is more difficult and Grade 0 cannot be diagnosed until the placenta is inspected.

A history of a sharp, tearing abdominal pain is quite helpful when associated with the other signs and symptoms of abruption. This pain occurs rarely alone and is usually associated with vaginal bleeding that is dark in contrast to the bright red bleeding of placenta previa. The hemorrhage may be concealed, or more likely, less than the degree of shock. If the hemorrhage is concealed, there is an associated uterine tetany, and with time, the height of the uterine fundus as well as the girth of the abdomen, will increase. Maternal shock is almost always of a greater degree than the amount of external bleeding, therefore, maternal shock with minimal external bleeding makes one think of abruptio placenta.

Uterine tetany may be minimal or boardlike to palpation. The uterine tetany appears to be increased with concealed hemorrhage since there is more infiltration of blood between the uterine muscle fibers thus producing spasm. However, the abruption may occur with little or no uterine tetany if the placenta is implanted low with a marginal separation and no concealed hemorrhage.

Fetal distress or death is much more frequent in abruptio placenta than in placenta previa and a history of violent fetal movements followed by cessation would suggest abruption. Fetal distress, that is a fetal heart rate of over 180 per minute or less than 100 per minute, is much more common than with the other causes of bleeding in late pregnancy.

Generally speaking, the abruption does not increase in severity, but this is not always true. In Series A and B, several patients progressed from Grade II to Grade III after admission to the hospital. Abruptio placenta must be considered in any case of significant vaginal bleeding after the 20th week of gestation whether or not it is associated with any other sign or symptom of abruption.

TOXEMIA

The classification of toxemia as recently revived by the American Committee on Maternal Welfare and the criteria for the diagnosis of each class were used in determining the incidence. Thus, the patients with a blood pressure of more than 140 mm. of mercury systolic and 90 mm. of mercury diastolic at some point during labor were not included. Also, proteinuria of three and four plus was present in many cases of abruptio placenta of Grade III severity, but again these were not classified as toxemia of pregnancy if no evidence other than this transient proteinuria was present.

Tatum[4] had an incidence of toxemia of 65.6 per cent and 161 patients with pre-eclampsia alone accounted for 70.5 per cent. Hypertensive vascular disease with superimposed pre-eclampsia was present in 27 per cent and eclampsia in 2.5 per cent. Kimbrough[8] reported an incidence of toxemia of late pregnancy of 8.8 per cent in 383 abruptions whereas Dieckmann[9] found 69 per cent and Adams[10] 65 per cent.

It is interesting to note that 45 per cent of the patients in Series A had toxemia compared to 33 per cent in Series B (Table II), although there was a higher incidence of Grade II and Grade III in Series B. It is interesting also to note that there was a higher incidence of toxemia with abruptio placenta of Grade II severity than of Grade III in Series A, and for this we had no explanation.

FETAL MORTALITY

In Series A, 102 infants were delivered since there were two sets of twins (Table III). The fetal mortality was 68 per cent which was higher than usually reported. This high perinatal mortality was accounted for by the fact that fetal heart tones were absent on 50 per cent of the patients on admission, thus the fetus was assumed to be dead. Other associated reasons were the incidences of prematurity, 58 per cent, and a high percentage of cases of Grade II severity.

There were 18 infants alive on admission that later died. Ten of these were of Grade I severity with six neonatal deaths and four stillbirths. All but two of the perinatal deaths occurred in premature infants; seven out of eight weighed less than 2,000 gm. Of the two term infants lost, one was an anencephalic and the other died of unknown cause with no autopsy performed. There were eight patients of Grade II or III severity with theoretically salvable infants. However, fetal

TABLE III

FETAL MORTALITY

	Perinatal Mortality		*Prematurity*	
	A	B	A	B
Grade 0	0	3 (33⅓%)	0	20%
Grade I	10 (27%)	11 (55 %)	51%	40%
Grade II	34 (87%)	29 (85 %)	72%	47%
Grade III	25 (96%)	27 (96 %)	46%	53%

TABLE II

INCIDENCE OF TOXEMIA BY DEGREE OF SEVERITY

Grade	*Pre-Eclampsia*		*Hypertensive Vascular Disease*		*Hypertensive VD With Pre-Eclampsia*		*Total*	
0	A	B	A	B	A	B	A	B
I	0	1	0	0	0	0	0 (0%)	1 (10%)
II	9	0	1	1	0	1	10 (27%)	2 (10%)
III	15	6	8	5	1	2	24 (63%)	13 (38%)
	4	6	1	7	6	0	11 (44%)	13 (46%)

heart tones disappeared within minutes after five patients were admitted to the ward and before any definitive therapy could be carried out. There were three patients with fetal heart tones present for a sufficient time for cesarean section to be contemplated and performed. Theoretically, early operative interference may have saved these three infants, but in each case the diagnosis was in question until fetal death in utero occurred.

Therefore, a decided effort to improve fetal salvage in Series B was made with an increase instead of a decrease in perinatal mortality. Although 10 cases of Grade 0 were included in Series B, the fetal mortality increased from 68 per cent to 76 per cent. Fetal heart tones were absent on 43 of the patients on admission and disappeared on 14 patients prior to delivery. Seven of the 14 patients had stillborn infants that weighed less than 1,250 gm. One infant was hydrocephalic, and fetal heart tones disappeared on four patients soon after admission and before any definitive therapy could be carried out. There was a delay in diagnosis in two patients because of a provisional diagnosis of placental previa, with intrauterine fetal deaths. One of these two infants was a premature stillborn.

MATERNAL COMPLICATIONS

There was a marked reduction in maternal complications in Series B except for hypofibrinogenemia (Table IV). In Series A, postpartum

TABLE IV

MATERNAL COMPLICATIONS

	P.P. Hem.		*Pelvic Infec.*		*Hypofib.*		*Acute Renal Fail.*		*Deaths*	
	A	B	A	B	A	B	A	B	A	B
Grade 0	0	0	0	1	0	0	0	0	0	0
Grade I	2	1	2	0	0	0	0	0	0	0
Grade II	4	8	5	0	0	0	1	0	2	0
Grade III	6	4	2	1	3	16	2	1	2	1

hemorrhage occurred in 12 per cent of the patients and in Series B, 15 per cent. There was a rather marked decrease in pelvic infection in Series B. Hypofibrinogenemia increased from three patients in Series A to 16 patients in Series B. In each case of hypofibrinogenemia there was clinical evidence suggesting a lowered circulating fibrinogen such as ecchymotic areas surrounding venous puncture sites, spontaneous hematuria, and/or hemopytysis. Also each case of hypofibrinogenemia was confirmed by two or more clot observation tests.

Renal failure occurred in only one case in Series B as compared with three cases in Series A. There were four maternal deaths in Series A and one maternal death in Series B. Two of the four maternal deaths in Series A occurred in cases of abruptio placenta of Grade II severity and were not directly related to the abruptio, but rather to other serious obstetrical complications since both patients died of cerebral-vascular acci-

TABLE V

TREATMENT OF ABRUPTO PLACENTA

	Amniotomy		*Pitocin*		*Cesarean Section*	
	A	B	A	B	A	B
Grade 0	0	0	0	0	0	0
Grade I	12	5	0	1	0	2
Grade II	28	24	4	10	2	3
Grade III	21	21	4	12	1	11

dents, complicating severe toxemia of pregnancy in which the small separation seemed of secondary importance.

The two deaths in abruptio placenta of Grade III severity were directly attributed to the separation of placenta. Both deaths were due to renal failure with uremia. The one death in Series B was of Grade III severity. The patient was admitted comatose, pulseless, and with clinical evidence of a massive uterine hemorrhage. Despite heroic efforts, including being transfused with unmatched type 0 negative whole blood, death occurred 20 minutes after admission.

TREATMENT

Treatment of abruptio placenta was directed by a uniformly conservative group of obstetricians and gynecologists. Basic regime consisted of replacement and supportive therapy, amniotomy in the moderate and severe grades of abruptio placenta irrespective of the condition of the cervix. Amniotomy was performed consistently in moderate and severe grades of abruptio unless there had been a previous spontaneous rupture of the membranes confirmed on sterile pelvic examination, or a delay in diagnosis (Table V). Pitocin stimulation was used in eight patients in Series A and 23 patients in Series B. There were no complications associated with its use, and delivery appeared to be hastened in each of the cases although there is no statistical evidence to support this statement. In general, Pitocin stimulation was

employed if labor had not occurred, or there had been no progress after an interval of two hours following amniotomy.

PHYSICAL EXAMINATION

A general physical examination on admission should include a measurement of the height of the uterine fundus from the top of the symphysis pubis and the girth of the abdomen at the umbilicus so that any increase in the size of the uterus from concealed hemorrhage may be detected. Venous blood should be obtained through a large caliber needle for immediate complete blood count and volume of packed cells. The patient's blood should be typed and crossmatched for at least 1,500 cc. of whole blood. Clotting time and clot observation tests should be done immediately, and the clot observation test should be performed hourly until the patient is delivered, or as long as indicated. Blood fibrinogen determination is preferred, if available, but is usually of only academic interest in treating hypofibrinogenemia. With the same large caliber needle, glucose and water should be started so that a large vein is readily available if transfusion becomes indicated. Oxygen is started per nasal catheter, and a physician is in constant attendance with the blood pressure being checked and recorded every five to fifteen minutes.

TREATMENT

If clinically and on sterile pelvic examination, abruptio placenta is diagnosed, the treatment for each grade of the severity is briefly as follows.[1]

Grade I—Bedrest and observation except in a patient with a near or at term fetus and a ripe cervix; then amniotomy is indicated. Blood replacement only if bleeding is excessive.

Grade II and III—Oxygen, blood replacement, amniotomy, and in certain selected cases a Pitocin infusion. Fibrinogen is made available. Cesarean section for fetal salvage in Grade II.

Amniotomy is essential to hasten delivery and to decrease the intra-uterine pressure, and thus the danger of hypofibrinogenemia from an infusion of thromboplastin. Even in the presence of an unfavorable cervix, amniotomy is usually followed by a period of inertia, then tumultous labor and rapid delivery. Blood loss should be combated with whole blood transfusions until the replacement is considered adequate. With abruption, retroplacental bleeding is difficult to estimate, and the maternal blood loss is usually underestimated. It should be remembered that rapid labor cannot be expected to occur if the patient is left in shock and is hypovolemic.

In Series A, cesarean section was performed three times and in Series B, 16 times (Table V). The indications for cesarean section in Series B are listed in Table VI. In Series A, one section was for uncontrollable maternal hemorrhage, another for fetal distress in a patient with previous section, and a third for questionable uterine rupture associated with the uterine scar from a previous abdominal delivery. In Series B, cesarean section was performed for fetal distress, or fetal salvage in four instances and three living infants were obtained. There was one neonatal death at 24 hours of age of unknown cause. An autopsy was obtained, but not performed on this full term infant. Cesarean section was performed for maternal salvage because of uncontrollable hemorrhage in nine cases and hypofibrinogenemia was present in six of the nine patients, but was not thought to be a factor in the production of the uterine hemorrhage.

TABLE VI

INDICATIONS FOR CESAREAN SECTION
SERIES B

Previous C-Section	*Transverse Presentation*	*Fetal Distress*	*Maternal Salvage*	*Fetal Salvage*
1	2	3*	9	1

* One postmortem C-Section

CESAREAN SECTION INDICATIONS

From a previous study,[1] cesarean section was indicated for fetal distress and uncontrolled hemorrhage in addition to the usual obstetrical reasons. This was modified in Series B in that cesarean section was indicated when hypofibrinogenemia was present, corrected, and delivery per vagina was not eminent. It is to be stressed that cesarean section should never be carried out in the presence of hypofibrinogenemia. Also in a previous study[1] it was concluded that cesarean section did not appear justified to reduce the interval between the onset of abruptio placenta and delivery, although it was felt that delivery ideally should be accomplished in four to six hours after abruption. However, in Series B there appeared to be some relationship between the duration of abruption and the development of hypofibrinogenemia.

SUMMARY

Two series of abruptio placenta managed by the same conservative group of obstetricians and gynecologists are presented and compared. Although a definite effort was made to increase fetal survival by the more liberal use of cesarean section, there was a decrease instead. The fetal survival rate and the incidence of maternal complications are associated directly with the degree of abruption and are influenced to a lesser degree by the elapsed time from placental separation to delivery. ★★★

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MY SQUARE LADY

This time medical science may have gone too far, what with an utterance by Dr. Carlton Fredericks of Newark, N. J., who qualified himself recently as iconoclast of the year with his explanation of the physiologic effects of kissing:

"When a fellow kisses a girl," Dr. Fredericks says, "the adrenosympathetic system calls on the liver for glycogen for energy. This, in turn, forces the release of insulin, vitamin B_1, and phosphorus to burn the sugar. In his brain, if he is doing any thinking—which is problematical—there is an exchange of starch, phosphorus, and thiamine between the thalmic and the cortical brain. As the pulse and respiration rates rise, there is increased exchange of oxygen on the intracellular level, which would mean increased consumption of thiamine and phosphorus."

Coronary Thrombosis

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Before 1912 no one died from coronary thrombosis—primarily because it had yet to be defined. Today, thousands of cases are known to occur daily. The author discusses the present concept of the disorder. History, etiology, diagnosis, and treatment are considered.

CORONARY THROMBOSIS as a definite entity was first described by Dr. James Herrick of Chicago in 1912. It was seldom considered and rarely diagnosed clinically even in the early 1920's. Patients who were stricken with it were said to have acute indigestion. During the years of 1921 and 1922 Dr. Paul White made the diagnosis of coronary thrombosis only nine times, although the diagnosis of arteriosclerosis with or without angina pectoris was not at all rare. During the nineteenth century such renowned pathologists as Aschoff and Virchow, each of whom performed thousands of autopsy examinations, reported not a single instance of coronary thrombosis—possibly because they never looked for it.

Times have changed. The diagnosis of "acute indigestion" is immediately suspected and a thorough examination to exclude coronary thrombosis is routinely made. Thousands of cases are known to occur daily. Not only are the middle-aged or elderly susceptible to attacks, but also young, apparently healthy men.

ETIOLOGY

Atherosclerosis producing narrowing, or partial occlusion is of fundamental importance in the causation of thrombosis. Indeed, thrombosis is merely one of the complications of coronary artery disease. More persons die suddenly of the disease itself without thrombosis than of an actual thrombosis. Complete obstructions may occur without giving rise to symptoms when collateral coronary circulation is adequate to prevent infarction.

Any arterial vessel may be involved, but the most frequent are the coronary arteries of men between the ages of 30 and 60. Next in frequency are the cerebral vessels and the aorta.

Some of the factors involved in the production of atherosclerotic changes in human arteries and hence coronary thrombosis are:

1. Age—The aging of the population is mainly responsible for the larger absolute number of cases. Although the disease does occur among the young, it is much more frequent among older people. One cannot deny a certain relationship between age and hardening of the arteries, but atherosclerosis must be considered a preventable disease rather than an inevitable result of aging.
2. Heredity—The high incidence of coronary artery disease in certain families is significant.
3. Mechanical factors—Atherosclerosis is more apt to involve arteries at their bifurcation and points of flexion. Incidence is lower in well-supported arteries.
4. Stress—At the present time no absolute relationship between stress and coronary disease has been established for man.
5. Hormonal factors—Due to the sparing effect of estrogen it is unusual to find coronary disease in women before the menopause unless they are suffering from hypertension, diabetes mellitus or some chronic valvular heart disease.
6. Diet—A high fat diet rich in cholesterol-lipid content appears to exert some influence on the development of atherosclerosis.
7. Smoking—Tobacco, in excess, may play its part. Statistically, the use of tobacco is more frequently correlated to heart disease then to pulmonary carcinoma.
8. Coagulation factors—Coronary thrombosis is essentially related to the coagulation mechanism of blood in an atherosclerotic artery. For this rea-

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son anticoagulant therapy has been advocated and has been shown to have beneficial long term results.

DIAGNOSIS

Coronary thrombosis with myocardial infarction can be diagnosed easily if the attack is typical. In its typical form the pain of coronary thrombosis is very severe, is retrosternal in origin, often radiates to the jaw or into the arms. Usually the pain is not relieved by nitroglycerine and may last from a few hours to several days. An increasing number of premonitory attacks of angina may occur. Several aspects of the pain of coronary thrombosis may be noted: 1. Radiation into the left arm is not essential. 2. Any pain located in the retrosternal area and lasting more than half an hour should be considered as a possible symptom. 3. Any acute indigestion not associated with abnormal abdominal signs in a person over the age of 40 should be seriously investigated.

Physical signs may vary from none to a great many. During the acute stage, signs of shock or collapse may occur. The pulse may be slow, normal, or accelerated. The very slow pulse may indicate a partial or complete heart block. Also the blood pressure may be high, normal, or low. A pericardial friction rub not only tends to confirm the diagnosis but indicates the lesion involves the anterior aspect of the heart.

In atypical cases the clinical picture may be so confused as to create a real problem. Conditions which may simulate such attacks are:

1. Pulmonary thrombosis and/or embolism
2. Viral infection of the respiratory tract
3. Acute pericarditis
4. Dissecting aneurysm of the thoracic aorta
5. Gallbladder disease
6. Perforated peptic ulcer
7. Acute pancreatitis
8. Acute intestinal obstruction
9. Pneumonia
10. Pneumothorax
11. Diaphragmatic hernia
12. Arthritis of the spine
13. Herpes zoster
14. Carcinoma of the lung
15. Cervical disc syndrome

The electrocardiogram not only demonstrates that there is myocardial infarction but often indicates the part of the ventricle involved and whether the infarct is transmural. However, for unknown reasons the electrocardiogram may not show any abnormalities for 24 to 48 hours and in some rare cases a week or more may elapse before the expected abnormalities appear.

Other laboratory tests may be used to estimate the extent of infarction when it is masked on the electrocardiogram by previous disease such as bundle branch block or past infarction and in borderline cases between subacute and acute coronary insufficiency. The most utilized of these tests is the measurement of transaminase (S.G.O.T. Serum glutamic oxaloacetic transaminase). The range of this enzymatic product in normal blood varies from 0 to 40 units. The myocardium, which is normally rich in this enzyme, liberates it into the blood stream beginning four to six hours after the coronary thrombosis. Maximum concentration is reached in 18 to 36 hours and the range returns to normal in four to six days. But it must be remembered that the test may be positive in other conditions such as rheumatic carditis, liver disease, pancreatitis, hemolytic anemia, and hemorrhagic ulcer.

The fibrinogen plasma concentration, the serum aldolose, and C reactive proteins are also positive in myocardial infarction. Myocardial necrosis, acting somewhat as a sterile abscess, gives rise to a low-grade fever, increase in the white cell count, and a rise in the sedimentation rate. However, the variations in these tests are well known.

TREATMENT

Note should be made at this time of the prodromal syndrome of coronary thrombosis. Here patients manifest symptoms of subacute coronary insufficiency about two weeks before actual infarction. Therefore, once the subacute type is recognized, he should be adequately treated, since about 20 per cent of cases will proceed to develop acute coronary occlusion. It would seem logical that such patients should be given anticoagulants not only during the two or more weeks of preventive treatment but afterwards for an indefinite period of time.

The most important forms of treatment in acute myocardial infarction are relief from pain, rest, and reassurance. The relief of pain is accomplished by the use of morphine given intravenously or hypodermically in adequate dosage. Occasionally, substitutes such as Demerol, Pantapon, or Dilaudid are used. Atropine sulphate may be given with each dose of morphine. Occasionally the use of aminophyllin in the muscle or intravenously is beneficial if the patient is not entirely relieved by the above medication. The routine use of oxygen is probably indicated whether signs of shock are present or not.

With due regard to the patient's physical condition, an enema may be given as early as 48 hours, not a week as in the past. Hence, the com-

plication of abdominal distension or fecal impaction is not so common. Nitroglycerine is contraindicated in the treatment of coronary thrombosis since it often adds a dangerous coronary insufficiency to the already present coronary thrombosis.

In order to prevent distension, decrease the work of the heart, and lower the serum cholesterol, a low calorie low cholesterol diet is given. This is often continued since it results in a desirable loss of body weight in those who are obese and perhaps helps control the progress of atherosclerosis.

VASOPRESSOR DRUGS

Initial shock which once proved so often fatal can often be overcome by the use of vasopressor drugs. These may be given whether clinical shock is present or not if the systolic pressure drops below 90 mm. Hg. Digitalis and quinidine are now given only when specifically indicated. Nausea, vomiting, and hiccups, which in the past often caused great concern, can now be readily controlled by appropriate medication.

Anticoagulants are used routinely in severe cases, in patients with shock, congestive failure, any marked change in heart rate or rhythm, and in those who have a history of thrombosis or embolism. Indeed, many physicians use them in all cases of coronary thrombosis, mild or severe.

PREFERRED CARE

Today, prolonged bed rest is considered inadvisable, and early chair treatment is preferred by many. While in bed, the patient is advised to move his legs in an attempt to prevent the development of phlebitis. Use of the bedside commode is allowed soon after the acute attack since the use of a bedpan often requires more exertion. Within three or four weeks the patient may be allowed to walk about his room. Of course, it is essential that each patient be treated individually, and not according to any set of rules.

The immediate mortality now varies between 15 to 25 per cent. The best outlook is in private practice in the first attack, the mortality rate being between 3 to 5 per cent. Dr. Arthur Master quotes a figure of 3 per cent in his own practice.

Assuming an immediate over-all mortality of 20 per cent, how many will survive one or more years? Coronary thrombosis is a disease in which the treatment and prognosis must be individualized. However, in general, those who recover and subsequently develop heart failure have a yearly mortality of about 10 per cent. At the end of five years only 30 per cent of those patients will be alive; at the end of 10 years, few, if any, will survive. Of those who have made a good functional recovery, less than 5 per cent will die each year. Therefore, after five years, 55 per cent will be alive; at the end of 10 years, at least 30 per cent; at the end of 15 years, 5 to 10 per cent may be living.

Patients who make a good functional recovery should be encouraged to go back to as nearly a normal life as possible. In fact, those who are not given financial compensation and are forced to work live longer.

SUMMARY

Continued study and research will further improve the immediate and long term outlook of patients who suffer coronary thrombosis. And it is reasonable to hope that atherosclerosis, which is apparently a disease and not an inevitable process of aging, may some day be prevented and the now common diseases of angina pectoris, coronary insufficiency, and coronary thrombosis will become as rare as typhoid fever. ★★★

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TIRED BLOOD?

Of 105 patients who came to see him because they were "tired," a Canadian doctor, Geoffrey Ffrench, reports in the *Canadian Medical Journal,* 25 per cent were anxious or tense, but the other 75 per cent were ill. Diseases ranged from stomach trouble to leukemia.

The Versatile Antrostomy

DANIEL F. FISHER, M.D., F.A.C.S.
and D. HARBERT ANTHONY, M.D., F.A.C.S.
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Few surgical procedures serve as a specific for as many conditions as the antrostomy. In the last 14 years the authors have performed over 500 of these versatile operations. From this experience they discuss indications for antrostomy, techniques and variations.

THE ANTROSTOMY IS PERHAPS the most discussed procedure in ear, nose, and throat work. Most of the discussion, strangely enough, occurs between the patient and the family physician, rather than among the specialists.

Patients are often heard to say, "I prefer not to have my sinus washed because once it is washed, it will always have to be washed again." They do not stop to realize that they might as well maintain, "I do not want my pneumonia treated, because I might have it again." A sinus infection cleared up by irrigation is no more guaranteed against recurrence than a sore throat cured by penicillin.

Other patients will hold, "I have two or three friends who have had sinus windows put in and they have even more difficulty than before." This attitude is easily understood considering the number of persons who have had antrostomies in which the opening either closed or was inadequate.

Because of the patient's attitude toward antrostomy and his own inexperience with the procedure, the average practicing rhinologist probably reserves the operation for the extremely involved patient. Often, however, antrostomy can relieve a number of annoying symptoms and thus shorten periods of disability. Most patients simply cannot afford the time to have their sinuses treated regularly.

Possibly no other specialty has a surgical procedure that acts as a specific for as many conditions. The following classification is designed to give a clinical, working arrangement for the problem concerned. What is lacking in technicality is made up in practicality. This classification is derived from experience with more than 500 antrostomies in the last 14 years.

Chronic Maxillary Sinusitis. This disorder occurs more often than any other. For practical, clinical purposes, this group includes those individuals who have a persistent infection in the maxillary sinuses for a large portion of the year. Their symptoms may vary from nasal stuffiness to dry sensation in the nose. They may have a history of thick phlegm which must be blown or snuffed out many times during the day. Most cases have an associated cough, either dry or productive, and a muffled feeling in the ears or actual hearing loss. While the chronic cases vary considerably, most patients have some evidence of infection.

During the relatively quiet stage when the chief complaint is a stuffy nose, puncture irrigation of the maxillary sinus will usually show myriads of small particles in the return water. If an applicator is dipped in the water, a little mucus may be pulled out. If the patient has been subjected to irritants such as dust, fumes or smoke, he will have periods in which the character of the material is a mucopurulent ball. After a few treatments or often spontaneously, this ball will revert back to a stage of small particles. Some patients maintain this mucopurulent ball practically all the time.

Recurrent Acute Sinusitis. Patients with this disorder, the second most prevalent, frequently require repeated irrigation. Often they have a history of a four or five head colds per year with one of more of these colds resulting in a sinus infection. As the years pass, the infections occur more frequently and require longer to clear up.

Allergic Rhinitis. Because of improper drainage of the sinuses, almost every case of allergic rhinitis, other than the mildest membrane reactions and

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seasonal episodes, ends up with sinus infection. Many individuals who can cope with either allergy or infection are unable to bear up under both.

Several considerations are important in the management of allergic rhinitis. In the first place, the allergy may be caused by some inhalant or ingested material or the patient may be allergic to infection in the sinus itself. Secondly, the formation of polyps may be from chronic infection as well as from purely allergic reasons. This can be demonstrated in pathological sections in some cases. Many recurrences of polyps are from lack of attention to an infectious aspect.

Fractures of the Orbit. With the increased incident of automobile accidents and participation in sports, fractures of the face are more frequent. Any blow on the zygomatic arch or the malar prominence or even on the eyeball itself, is likely to cause a fracture of the antrum wall and orbital floor. Because the mucous membrane tears whenever there is a fracture of the antrum, blood is present in the antrum. This in itself may lead to infection as blood is a good culture medium for bacterial growth.

If the blow is more severe and fractures the zygomatic arch, there is usually a fracture through the fronto-zygomatic suture, the infraorbital foramen, and the anterior wall of the maxillary sinus in the canine fossa region. When this occurs, the bony fragment is pushed downwards, inwards, and posteriorly giving in most cases enophthalmus and a "dish-faced" individual.

Other problems may be associated such as inability to move the jaws properly because of the fractured zygomatic arch. The patient may also have a transverse fracture of the maxilla with "floating" upper jaw. Another interesting and infrequent condition exists when there is a fracture of the floor of the orbit without involvement of the rim from a direct blow on the eyeball. In such cases, the floor has a blown-out effect down into the antrum with an enophthalmus and diplopia associated. An antrostomy plays a vital role in repairing fractures of the orbit.

OTHER CONDITIONS

Several less frequently observed conditions are indications for antrostomy. A patient will often suffer from an oral-antral fistual following dental extraction. This condition probably exists more frequently than noted because a majority of the cases heal over spontaneously without seeing an otolaryngologist.

Dental surgeons should be advised that if the antrum is invaded, currettement of the socket is inadvisable. This will help promote spontaneous closing. The principle of irrigating the antrum through the fistulous opening should be condemned. If irrigation is necessary, it should be done through conventional sinus irrigation. If conventional irrigation, plus heavy antibiotic and chemotherapy does not suffice with these acute secondary antrum infections, an intranasal antrostomy is indicated. This rarely fails to control the situation and heal the fistula.

CHRONIC DRAINING FISTULA

An antrostomy will usually suffice also in cases of a chronic draining fistula if the fistula is small. However, it may be occasionally necessary to freshen up the edges or cover them with a gum flap.

There has been considerable interest recently in a tearing eye in which the lacrimal sac is not dilated, and fluid passes on irrigation. In some of these cases the maxillary sinus plays a part and may necessitate an antrostomy.

Cataract extraction is another important factor in sinus infection. It may cause an iritis or furnish a reservoir of bacteria resulting in wound infection. A good routine is to give ear, nose, and throat clearance before cataract surgery.

Chest conditions provide another important indication for antrostomy. These include severe asthmatics, chronic bronchitis, emphysema, and bronchiectasis. Any tendency toward chronicity or recurrent acute sinus infections should indicate an antrostomy without delay.

There are a few instances of gastro-intestinal disturbance which have been aggravated by chronic sinus drainage in which the patient has swallowed postnasal drippings. These have been relieved by antrostomy. Antrostomy is also performed in cases of nephritis for recurrent, acute sinus infection. Recurrences of the nephritis have been prevented.

ANTROSTOMY TECHNIQUES

Nearly every patient can be operated on comfortably and safely with local anesthetic. The operation is less frequent in children, but is sometimes indicated. Children 12-years-old and older can be operated under local anesthetic except when the individual is extremely immature. Children under 12 should be given general anesthetic.

Preoperative adult preparation consists of assuring the patient that it can be done with absolute comfort. Medication is 1½ gr. Nembutal plus an injection of HMC No. 1, one and a half hours prior to operation. Half of the HMC may be omitted if the patient is small or has a tendency to

be easily oversedated. If the patient is in the younger age group or is sensitive to morphine, then Scopolamine and appropriate doses of Demerol may be substituted for the HMC.

The patient is draped in a semisitting position with the head drape across the eyes to prevent glare from the head mirror. The septum, inferior turbinate, floor and inferior meatus wall are painted with multiple applications of 25 per cent cocaine with Adrenalin. After about 10 minutes, the inferior turbinate is fractured gently upwards, being careful not to tear the mucous membrane.

OPERATIVE PROCEDURE

A thin, long-bladed septum speculum of the Killian or Storz type is then inserted so that it supports the turbinate and leaves the inferior meatus entirely exposed. This allows easy injection of the inferior meatus wall with a long tonsil-type needle with a short bevel. Two or three cc. of 4 per cent Novocaine is injected under the mucous membrane, being careful that it extends down to the floor and up to the base of the inferior turbinate. Several sites are used. A small, curved Thornwald trephine is then used to make the initial opening through the inferior meatus wall being careful not to break down the wall.

The next step is to enlarge this opening to the base of the turbinate with the Yankhauer Universal biting punch. The opening is then enlarged straight down to the floor of the nose with the matching Yankhauer instrument. A Freer-Grunewald instrument can then be inserted in this hole, fitting alongside the base of the turbinate. Two bites with this instrument is usually enough to arrive at the posterior wall. Then by angling the Freer-Grunewald instrument, most of this remaining wall can be removed down to the floor of the nose. The anterior portion of the wall is then removed with a front cutting Wagner punch.

TWO IMPORTANT POINTS

All possible wall is removed level with the floor of the nose, using the Yankhauer instrument if possible. This last portion may require the Freer-Grunewald instrument, and if it is unusually thick and these instruments will not suffice, a Kerrison like instrument designed by Lilly may be required to finish this floor. This instrument is only designed to cut upwards and the handle must be held up in the air to cut this floor.

Two points are most important: 1. Since the nasolacrimal duct enters the anterior portion of the inferior meatus, the upper anterior angle must be cut cautiously. 2. The posterior palatine artery is close to the posterior wall and profuse bleeding can occur if this is cut. It is best to leave two millimeters of the wall posteriorly.

One of the greatest helps in recent years has been the use of oxycel gauze made by Parke-Davis. Usually, there is some bleeding from the posterior wall, especially its lower portion. A good procedure is to cut off some pieces of oxycel from the 3 x 3 package, and straddle the wall with this, holding pressure with the dressing forceps for a few minutes until the bleeding is controlled. If the oxycel straddles this posterior wall, only spot packing is necessary. This is all that is necessary to control bleeding. The patient is certainly more comfortable because this spot packing is not annoying, does not have to be removed, and the oozing is slight throughout the day.

POSTOPERATIVE CARE

The patient is kept in bed 24 hours with some head elevation. An occasional dose of Demerol may be needed the day of operation and 5 gr. Sodium Luminol by hypodermic or 25 mg. Compazine suppositories for the occasional case of nausea. The oxycel liquifies itself and needs no particular attention. If the patient lives a reasonable distance, it is preferable to flush out the antrum every week or 10 days for four or five visits, using a small blunt cannula of some form. After 10 days, the patient is instructed to blow the nose well numerous times during the day to help clear out the debris.

With few exceptions, polyp cases have an accompanying maxillary sinus infection, and a somewhat different approach is indicated. It is a well-established fact that the mucous membrane of the lateral wall of the nose is least firmly attached in the middle meatus. For this reason, the polyps are predominant in this area. A thorough removal of polyps should be first performed and at the same operation, an antrostomy opening made using the middle meatus, removing the middle meatus wall. In this way, two things are accomplished: (1) Antrostomy opening and drainage is established and (2) the most likely portion of the nose for polyp formation is removed, thereby decreasing the recurrence rate.

MIDDLE MEATUS ANTROSTOMY

In doing a middle meatus antrostomy, these instruments are needed: (1) the Yankhauer Universal up and down-biting punch, and (2) the Wagner front-biting punch. This antrostomy is easier to do actually than through the inferior meatus, but it is well to remember that the middle meatus slopes sharply downwards in its posterior portion. There is an occasional case in which

the middle meatus is rather small, and a middle meatus antrostomy is not satisfactory. Then a conventional operation should be done in the inferior meatus in addition to the middle meatus antrostomy.

POLYP REMOVAL

Cases following polyp removal should be watched closely at intervals of several months for about a year so if a polyp formation recurs, they can be easily handled. The authors in the last several years have designed a polyp coagulating instrument, manufactured by Cameron Surgical Company, which operates off of the Cameron radio-cautery. It consists of a sharp needle with attached suction. The needle is plunged into the polyp in its body and the current turned on until the polyp blanches. The same is done to the base. It can be used repeatedly at the office under light cocaine topical anesthesia. This coagulation of the base causes scar tissue and helps prevent recurrence.

Finally, there is the treatment of fractures of the orbital floor and zygomatic arch. Some 13 years ago, the authors conceived the idea of reducing fractures of the orbit without the conventional method of Caldwell-Luc incision, manual manipulation and packing. To accomplish this, an initial opening is made with the Thornwald drill in the inferior meatus. Using only several bites with the Yankhauer instrument, the opening is enlarged to the point in which the Anthony-Fisher intramaxillary sinus balloon can be rolled upon itself and pushed into the antrum. The balloon is then inflated with water to sufficient pressure to unlock and expand the fractures. Then the pressure is reduced to where it acts as a splint to allow healing to take place.

With this technique, it is absolutely essential that the antrostomy opening be made as small as possible to insert the balloon; otherwise, there is a tendency for it to crawl out into the nose. In the occasional case that already has a large antrostomy opening, an artificial wall should be made from the septum over to the inferior meatus out of Simpson splints placed side by side.

SUMMARY

1. This operation (inferior meatus antrostomy) can be perfectly successful with an adequate, permanent opening in every individual with the exception of small children. The operation in children is usually an emergency procedure, whether acute or chronic, and a permanent antrostomy can usually be accomplished through the middle meatus.
2. No case will ever be harmed by an antrostomy properly done. Competent authorities agree that the normal physiology of the nose is not altered from an antrostomy.
3. An antrostomy will provide comfort, health, and the saving of untold hours of work for those individuals who suffer from cronic or recurrent acute infections, and they reap dividends for the remainder of their lives.
4. Antrostomy has proved a short, relatively nontraumatizing procedure for recent fractures of the orbit with restoration of function and restoration of cosmetic appearance.
5. Proper intranasal antrostomy has relegated radical antrostomy procedures to a rare and occasional operation. The simple procedure with proper instruments allows one to curet almost any polyp necessary. The authors thoroughly concur with French Hansel who has stated that with proper drainage the patient is more comfortable and has a better lining in most cases than if a radical procedure were performed.
6. Recurrences of a frontal sinusitis are rare if the maxillary sinus has been relieved.
7. All intranasal antrostomies, whether performed in the middle meatus or inferior meatus, should be made large and rectangular as possible with square corners to discourage closing of the antrostomy.
8. Twelve years of age is average for the floor of the antrum to pass the floor of the nose. Therefore, the middle meatus antrostomy is more satisfactory in young children. ★★★

220 South Claybrook Street

PHATAL PHYSICIANS

Recent headline in the Hanover, Pa., *Sun:* "Hanover General Hospital Takes Step Forward in Combatting No. 1 Killer—Visiting Consultants."

Immunological Aspects Of Tuberculosis Control

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In the last decade the tuberculosis death rate in Mississippi has dropped from 28.6 to 7.8. Methods used to effect this decrease and future goals are discussed. The author, who is director of the Division of Preventable Disease Control, Mississippi State Board of Health, reports the present status of tuberculosis in the state. Epidemiologic aspects are also considered.

THE CHEMOTHERAPEUTIC APPROACH to the control of tuberculosis has been a long awaited phenomenon. It is, perhaps, surprising that there should have been, and still continues to be, a large body of opposition to outpatient drug therapy (OPDT). Opposition may be based on one or several factors or even none at all. Surprise gives way to understanding on even casual review of the history of medicine with regard to tuberculosis. Probably no disease has been the subject of such a vast amount of investigation and speculation.

INVESTIGATION

Investigation is of immediate concern and speculation not logically directed by continuing investigation can hardly be supported or endured. The facts in reference to lower levels of prevention should be accepted. Certainly, profound changes in the pattern of tuberculosis occurrence are well documented in the period preceding general availability and use of antituberculosis drugs.

It would be nothing short of folly to dismiss the potential public health benefits to accrue from use of all methods for attacking tuberculosis and at all levels of prevention. On the other hand, the trend toward dismissal of tuberculosis as a public health problem has a familiar ring and one which will be heard with increasing clarity in the years ahead. Strange though it may seem, at first glance, there is almost nothing known of the ecology of tuberculosis. In this period of increasingly effective therapeutic drugs with the concurrent increased capability accruing to "standard management regimes" it becomes more urgent than ever that the natural history of disease be understood. Meanwhile, the effectiveness of drugs can be utilized toward the goal of eradication of tuberculosis, if possible.

Eradication must necessarily be predicated in terms of generations rather than the usual short term "five year plan." Nationwide attention is being focused on community organization for the eradication of tuberculosis with chemotherapy as the tool. This is largely a restatement of the Mississippi program officially initiated in 1953, but which had operated in some counties since 1948. While it carries all the old connotations of the short-time, peak effort drive, a startling change in five years is not to be expected.

MODERN ERA

The modern era of tuberculosis control in Mississippi began in 1946 with the formation of the Tuberculosis Control Unit and designation of a centrally responsible administrator to coordinate all phases of the control program.

The first milestone was the completion of the first statewide registry of tuberculosis patients in 1949. The next two years were devoted to standardizing the registry system as the basis for control. Currently, the eighth annual analysis of the thirteenth annual follow-up of registry cases is

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being completed. Certain characteristics of the natural history are evident, even in so short a period.

As of December 13, 1949, there were 6,155 register cases in the state, 593 hospitalized and the

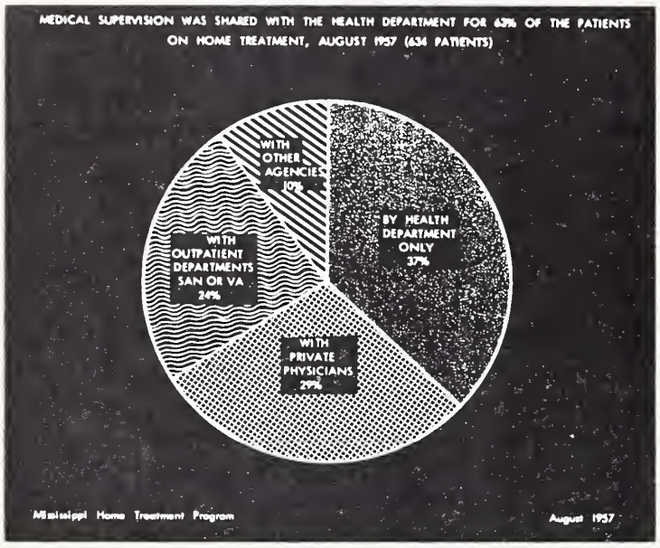

Figure 1.

remainder at home. Of those at home, 866 were classed active and 635 were sputum positive. Medical services was rendered to 2,343 of the cases at home. The death rate for tuberculosis for 1948 was 28.6. As of December 31, 1958, total register load was 5,155; 704 hospitalized and the remainder at home. Of those at home, 1,602 were classed as active with an additional 422 undetermined. A total of 3,218 patients at home received medical care. The death rate for 1958 was 7.8. The number of newly reported cases continued to balance with the preceding year, ending a slow decline. The total number of new active reports for 1959 establishes a three-year trend at near the same level—slightly below 900 per year.

The effect, now becoming apparent, will begin to allow decrease in register load as the mass of inactives begin completion of the five-year follow-up. This is estimated to amount to a 1 per cent decrease in register load for 1959.

CRASH EFFORT

It has become increasingly evident that the natural selection processes of tuberculosis have worked toward a much more rapid decline in mortality rates than in newly reported case rates.

Early in the last decade, it became increasingly evident that some other force must be employed if tuberculosis control were to become a reality. Consequently, a crash effort was made in 1953 to bring under outpatient drug therapy those patients who could not or would not enter hospitals or observe prescribed precautions.

In 1957, the need for evaluation of the program was acutely felt, and a survey-analysis study of the Mississippi program of home treatment for tuberculosis was begun by the U. S. Public Health Service. Most physicians are familiar with the initial report marking the end of two years' study effort. Brief highlights will recall to mind that the home treatment program was adjunctive and not separate from the standard accepted management by hospitalization. The cold facts were simply that there was full occupancy of the state's 783 tuberculosis beds. Average patient stay was over two years and there were 1,712 patients at home, either on waiting lists or eligible.

PROGRAM PROCEDURE

Availability of laboratory, x-ray, consultant, supervisor, and sanatorium facilities was present and operating on a local service basis in every county under the central control of the state health officer. There had been evident desire to attack the problem and policy declaration channeled and directed the effort within the confines of the medical community and good health practice.

Health departments assumed supervision for 37 per cent of patients who would not otherwise have come to treatment. Supervision was shared with practicing physicians for 30 per cent and with various hospital out-patient services for 33 per cent. Patients under sole care of their own physicians were not included in the study (Figure 1).

The response to the expanded program was enthusiastic from patients as well as the medical community (Figure 2). Activity in case holding by local health department personnel and coordination of all phases of control activity re-

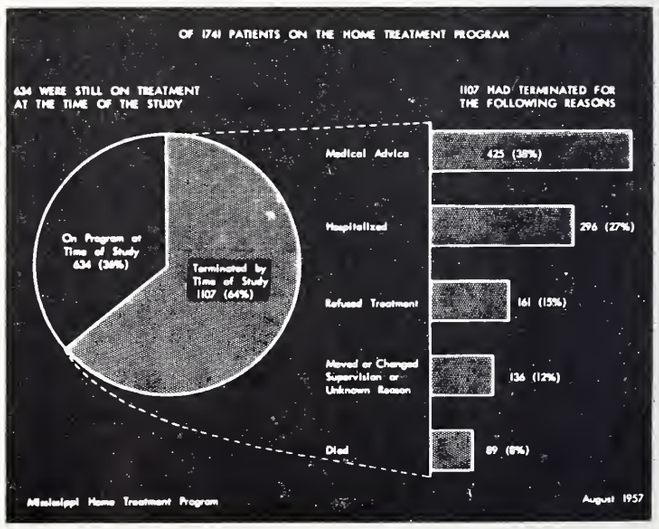

Figure 2.

sulted in a surprisingly good patient response (Figure 3).

One of the discouraging weaknesses in tuberculosis control has been the large proportion of patients who come to diagnosis and treatment when this disease is already advanced (Figure 4). Additionally, maintenance of current bacteriologic status reports constituted a handicap which has received considerable attention with evident favorable findings (Figure 5).

Therapeutic effectiveness of the combined program has been shown in many studies. Pitfalls become clearer and methods for avoiding them are constantly being devised. It seems evident that failure to respond to drug therapy is to be expected in many instances. At the same time, the organism may become adapted to a "noxious" environment of antituberculosis drugs. A close balance has been maintained through field conferences conducted by physicians well qualified in tuberculosis control in order to provide optimum treatment schedules and incorporate hospitalization into a workable practical procedure, individualized for each patient.

TABLE A

TREATMENT STATUS OF NONHOSPITALIZED REGISTER CASES AS OF 12-31-58

(Exclude Cases Closed at End of Year)

MISSISSIPPI HOME TREATMENT PROGRAM FOR TUBERCULOSIS CONTROL, 1959

Treatment Status	*Total*	*White*	*Nonwhite*
Total	4,451	2,534	1,917
Never on OPDT	1,341	924	417
Under HD supervision	753	458	295
Under other supervision	588	466	122
Currently on OPDT	1,434	665	769
OPDT stopped during year	455	232	223
Entered hospital	23	13	10
Changed supervision	10	8	2
On medical advice	325	157	168
Refused or lost	71	40	31
Moved or unknown reason	26	14	12
OPDT stopped before current year	1,098	629	469
Unknown	123	84	39

Other evident weaknesses within the control effort have been elucidated and improved. Diagnosis by stage and status, including bacteriologic studies, are becoming routine on initial report. Periodic follow-up of cases has been standardized in the absence of specific indication to vary the procedure through more frequent review by the consultants.

The original study has provided a basis for the continuation of an effective annual re-evaluation so that the study is continuous. Additional problems are becoming evident but cannot be evaluated this early.

In particular, the problem posed by the recent recognition of the so-called "atypical" acidfast bacillus does not appear to be near any early resolution. Perhaps a relatively mild cousin of M. tuberculosis, such as the M. kansasii, could have been more easily accepted, even with pigment formation, had there not appeared the problem of type or variant specific proteins with resultant lack of cross-reaction in skin test response.

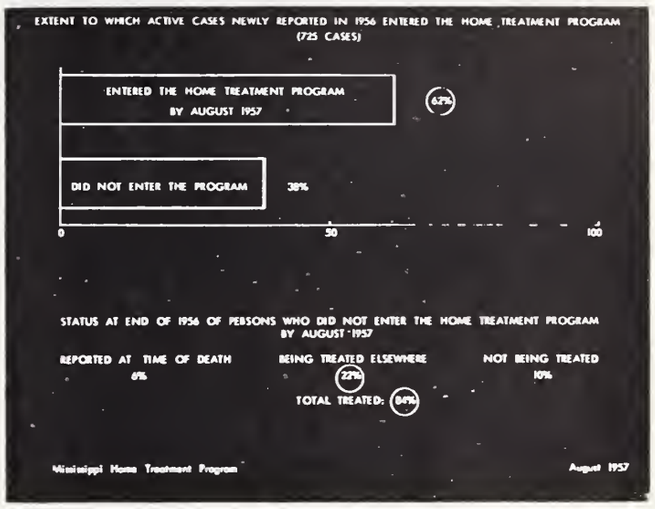

Figure 3.

The problem of classification of pathology associated with the atypical group of bacteria has caused considerable concern. While it is too early to finally evaluate their importance, it would seem altogether reasonable and certainly consistent with past practice to recognize variations in strain, type or variants. Some members of a given genus may be specific for one species of host, producing in another animal an atypical reaction and clinical picture. Consideration of the atypical AFB on some such basis presupposes pathologic processes in the host not inconsistent with the diagnosis of tuberculosis, isolation of the atypical agent, and specific skin test reactivity of the patient to a PPD prepared from the isolate.

STATISTICS

It is worthy of note that as of December 31, 1958, a total of 4,451 non-hospitalized cases were on register. Of these 3,111 had been treated on the home care program but only 1,434 were currently on treatment (Table A). The average treatment period for all cases ranged from 18 to 24 months (Table B). It can be seen that the

bacteriologic status closely parallels the period of treatment (Table C).

Immunity as a process of protection against disease is more commonly accepted than are those gradations of the same mechanism, such as hy-

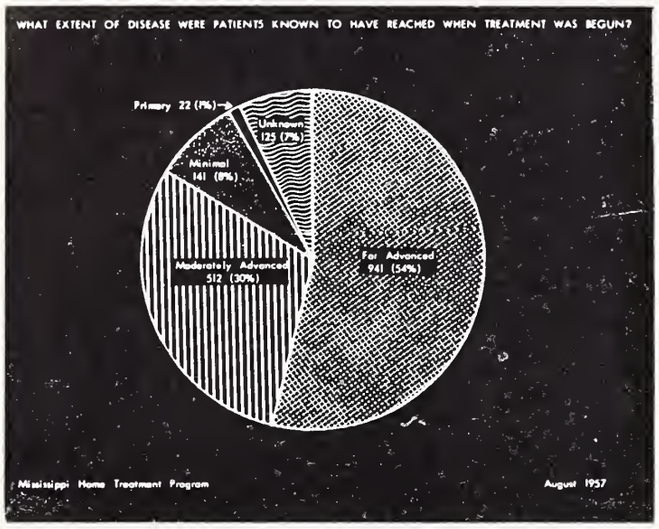

Figure 4.

persensitivity. Allergen and antigen are quite often confused.

One need but call to mind the arguments over the etiology of Boeck's sarcoid to more clearly see the implication. Strong association exists between pine forests and case concentrations. Additionally, pine pollen has an acid fast staining characteristic. Nevertheless, looking a little farther, it is readily apparent that the tubercle is microscopically a rather typical reaction to a foreign body.

Tuberculosis in high risk areas can be shown by statistical methods to occur without any observed primary phase. There is presently a growing tendency, based largely on reports from high risk countries, to adopt this as dogma. This is inconsistent with the theory of protection—sensitivity cannot result unless there be an allergen-host trial period. There is no assurance that any given person will become so reactive to tubercle bacilli as to respond with clinical manifestation or even show a positive skin test.

In tuberculosis, it seems clear enough that adult type disease developing on what was thought to be an active primary is indicative only of close, continuing contact with an open case. Repeated, frequent stimulus results in hyperimmunization or allergenic state.

On the other hand, there are some people who seemingly cannot be infected with tuberculosis even on prolonged, continued exposure under the poorest of sanitary conditions. Most persons fall somewhere between these two extremes.

Only the United States presently disapproves mass BCG usage and, even so, opinion varies widely. The most frequently advanced arguments against BCG are those of vaccine effectiveness, safety, and desirability.

Safety does not constitute a matter for immediate concern so long as the attack rate is high, but failure to protect is also significantly high, indicating that a point may be reached at which vaccination might predispose, rather than protect. Those countries in which BCG is widely used have high attack rates. They also have large proportions of the population of all ages whose skin tests are positive. Consequently, case finding by skin testing is impractical.

There can be no reasonable doubt but that immunity in tuberculosis does occur. While this immunity is nonsystemic, it is tissue specific, quite strong and highly effective in a population where sputum positive cases are excessively high.

The substance of immunity in tuberculosis is not clear as yet. It is generally accepted that those who exhibit a positive reaction to intradermal OT or PPD are reflecting a past infection with the tubercle bacillus and that this reaction results in a measure of protection.

Microscopic examination of the skin test site shows the similarity to other localizing and rejection processes. There is a striking difference between that resulting in a true immunizing reaction, such as smallpox, and the hyperallergenic or hyperimmune reaction to tuberculin. The latter process is characterized as "granulomatous" and

TABLE B

CASES ON OPDT BY STATUS AND LENGTH OF TIME SINCE TREATMENT STARTED AS OF 12-31-58

(Exclude Cases Closed at End of Year)

MISSISSIPPI HOME TREATMENT PROGRAM FOR TUBERCULOSIS CONTROL, 1959

	Status of Current Diagnosis				
Length of Time Since Treatment Started	*Total*	ACTIVE	ARRESTED	INACTIVE	NOT STATED
Total	1,434	940	80	309	105
Less than 6 months	191	153	2	24	12
6-11 months	267	179	6	54	28
12-17 months	210	136	12	45	17
18-23 months	196	118	10	52	16
24-35 months	234	139	14	65	16
36-47 months	137	88	14	31	4
48-59 months	95	65	9	16	5
60 months or more	104	62	13	22	7

is largely one of "isolation and exclusion" or the foreign body reaction.

Sensitivity ("skin test") offers some protection against the occurrence of tuberculous meningitis in continuous contact with an open case. This is true whether the sensitivity be derived from BCG or natural infection. It is also evident that such "protection" is easily overwhelmed by repeated, continuing attacks from the bacillus.

It would appear that the host tissue reacts to the presence of the tubercle bacillus slowly and late on initial infection. The resultant reaction removes the antigenic stimulus originating from tubercle bacillus metabolism. The second phase of activity follows violently with second or later exposures and is that of "exclusion" or expulsion. If exclusion, expulsion efforts later may lead to release of viable tubercle bacilli and "reactivation." In either case, first or last, a bacteremia is likely to occur so that lesions of other organs are relatively frequent. The similarity, in many respects, of the tubercle and the gumma of syphilis is worth noting in passing.

The natural history of tuberculosis would indicate the reliability of the expression that susceptibility to infection increases with age in proportion to modification through experience with the agent. A rationale may well exist between the frequency of meningitis in the very young in this country and the frequency of negative findings in these patients on chest x-ray.

We might reasonably predicate that skin test sensitivity is being deferred until later in life and that tuberculous meningitis in older age groups may become relatively more frequent.

At the same time, the reservoir of persons with chest lesions classed as inactive and arrested has grown quite rapidly during the past two decades. There is a notable tendency for such lesions to "reactivate" under the stimulus of any debilitating condition, especially other infections of the respiratory tree. Consequently, it would be foolish to expect a diminution in the community reservoir of infection in the face of the facts of an expanding population segment in the group past 65.

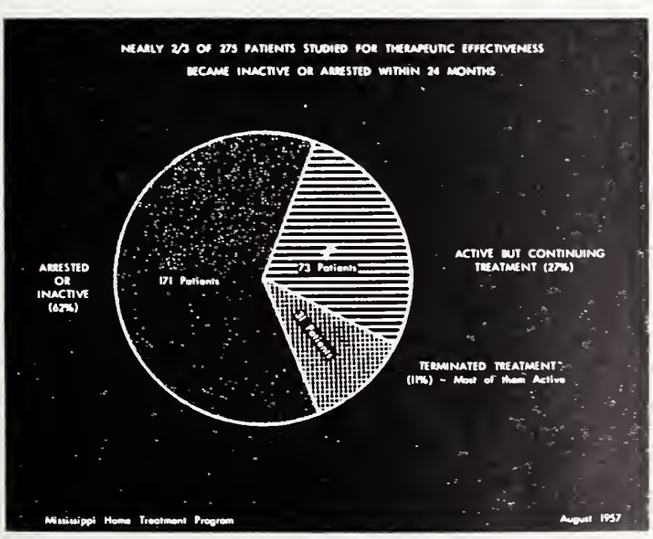

Figure 5.

TABLE C

CASES ON OPDT BY BACTERIOLOGICAL CLASSIFICATION AND BY LENGTH OF TIME SINCE TREATMENT STARTED AS OF 12-31-58

(Exclude Cases Closed at End of Year)

MISSISSIPPI HOME TREATMENT PROGRAM FOR TUBERCULOSIS CONTROL, 1959

Length of Time Since Treatment Started	*Current Bacteriological Classification*			
	Total	POSITIVE	NEGATIVE	NO REPORT
Total	1,434	612	684	138
Less than 6 months	191	105	62	24
6-11 months	267	122	113	32
12-17 months	210	86	99	25
18-23 months	196	62	118	16
24-35 months	234	78	131	25
36-47 months	137	57	72	8
48-59 months	95	51	40	4
60 months or more	104	51	49	4

Dissociation of contact with infections results in loss of protection in time. It seems reasonable to predict that an increasing number of the older population segment will have negative Mantoux reactions and, within 25 to 40 years, first infections and fulminating pneumonia would be expected to be quite common. Such an occurrence in the older population group could be devastating enough to seriously alter the age distribution of the population. Prudence dictates a course of action designed to reach the entire population, with particular emphasis on delineation of the high risk groups.

SUMMARY

The reorientation and direction of control activities in tuberculosis requires the continuation of long-term epidemiological, adequately controlled studies. It seems evident that the present nationwide interest and focus of attention on eradication of tuberculosis finds us in a strong position for the first 100 year plan. ★★★

2423 North State Street

Mississippi's Future Contribution To Medical Education

GUY A. CALDWELL, M.D.
New Orleans, Louisiana

In order to maintain the present ratio of physicians to population (141 per 100,000), the nation's medical schools must be producing 11,000 graduates a year by 1975. This is almost a 50 per cent increase over today's output. Mississippi's part in the necessary expansion, says the author, is to enlarge the facilities of the medical school and hospital, to continue state scholarship loans, and to embark on a program of active recruitment of future physicians. Failure to meet the medical needs of the country will eventually result in a lower standard of medical service, he concludes.

MISSISSIPPI WELL MAY BE proud of the contributions she has made to medical education during the past half century. Most noteworthy are the establishment in 1905 of a two-year medical school at Oxford and the initiation of state scholarship loans in 1946.[1] Equally important was the appropriation in 1950 of state funds for construction of a four-year medical school and teaching hospital at Jackson. In 1956, the new school began to function and the two-year program at Oxford was discontinued. The first four-year class graduated in June 1958.

NO TIME TO REST ON LAURELS

Laudable as are these past contributions to medical education in the South, this is not the time for Mississippians to rest upon their laurels, but rather to begin to help the nationwide drive to meet an impending crisis in medical education. It now appears necessary to increase the number of medical school graduates rapidly in order to provide medical care for a population that is expected to increase from 180 million to 235 million in 1975. This paper will analyze the national problem briefly, review the plans presently projected for its solution, and discuss the part that may be assumed by the Mississippi medical profession.

The situation which American medicine faces between now and 1975 is well summarized in a statement from "Physicians for a Growing America," a report of the Surgeon General's Consultant Group on Medical Education:[2] "To maintain the present ratio of physicians to population (141 per 100,000) will require a total of 330,000 physicians in 1975. If schools continue to produce at their presently planned levels, the number by then would be only 313,000. To have 330,000 physicians by 1975 will require 11,000 graduates a year by that time, which is 3,600 more than the present number or almost a 50 per cent increase in output.

"This output will require expansion of present schools and the establishment of a number of new schools. Since the establishment of a new medical school usually takes about 10 years from the first planning to graduation of the first class, planning the expansion of medical educational opportunities and finding the means of financing such expansion must begin now if the 1975 goal is to be reached. Delay will only magnify the problem."

A SIMPLE ANSWER?

The answer to this monumental problem confronting American medicine seems quite simple as stated: "This output will require expansion of present schools and the establishment of a number of new schools." However, the complete answer is not easily obtained. A few of the difficulties may be discussed briefly.

Read before the Section on Medicine, 92nd Annual Session, Jackson, May 10-12, 1960.

First, consider expansion of the existing schools. The dean of a medical school has written an editorial on "Physicians for the Future,"[3] in which he says: "The expansion of existing medical school facilities would seem practical and logical on casual review. This is an erroneous conclusion. . . . There is not a medical school in the United States that could increase the number of first-year students by 10 or at the maximum 20, without long-range planning, if current standards of excellence are to be maintained."

CONSULTANT GROUP'S VIEW

However, the Consultant Group on Medical Education took a more optimistic view. It said: "In the past 10 years most medical schools have increased enrollment substantially. In 1948 the four-year schools had an average of 316 students; 10 years later these same schools averaged 381 students, a 20 per cent increase. . . . Present schools have indicated that they could increase their first-year enrollment by 1,060 students if funds for necessary construction of facilities were available. . . . The replacement of obsolete structures and the addition of the facilities (exclusive of hospitals and research facilities) required for this expansion of 1,060 students will cost approximately $325 million."

About one-fourth of the four-year schools have fewer than 300 students. With financial assistance, these could probably accommodate classes of 100 or more in each of the four years. Not only will additional buildings and equipment be required, but also more teachers, and those needed for the two basic science years are in short supply. Consequently, the simple suggestion of expanding the existing facilities involves considerable time and planning, the expenditure of $325 million to be obtained from undetermined sources, and additional faculty members with funds for their support.

COST OF NEW SCHOOLS

Establishment of new medical schools at first thought would seem to be feasible if sufficient funds are made available. A glance at the chart showing the location of schools of medicine and osteopathy indicates at least nine states without medical schools. These are sparsely settled, relatively poor states that cannot afford to assume the costs of building and maintaining a medical school, nor do they have available the hospitals and clinical facilities that are essential to good medical teaching. New medical schools cost $8-10 million and require hospitals costing from $5-15 million. Therefore, additional schools of medicine must be fostered by universities located in states and cities where schools already exist. This makes it all the more difficult to finance the construction and maintenance ($1.5 million per year) of new schools, and there is also the difficulty of recruiting a faculty, particularly for the basic science years.

In the foregoing considerations, it has been assumed that the supply of medical students is unlimited, and if new schools are opened and some of the old schools make provision for larger classes, excellent students will hasten to use them. This is a natural assumption because we know that during the past 10 years all schools have had many more applicants for admission than there were places available. However, the number of applicants seems to be diminishing and their scholarship attainments are lower. Some of the deterrents to medical education are increased competition from other professions, the time required for the training of a physician, availability of opportunities for medical education, and the cost to the student. Therefore, an active program for recruitment of good students will be necessary if the output of medical school graduates is to be increased by 50 per cent in the next 10 to 15 years.

LOANS AND SCHOLARSHIPS

Doubtlessly it will help reduce the cost of medical education to the student if more scholarships and loan funds, similar to those provided for students in Mississippi, can be provided. This should attract additional students who could otherwise not afford to go to medical school. Perhaps still more students would become interested in a medical career if its advantages and opportunities were presented to them while they were in preparatory and high schools instead of waiting until they were in their first or second year at college.

Up to this point we have been considering ways and means to provide a sufficient number of highly-qualified physicians to care for a greatly-expanded population by 1975. Let us now consider what might occur if this challenge is not met. Certain recognizable trends already have developed that might increase rapidly if American medicine does not provide for the country's future medical needs. The American public will never tolerate delays in obtaining medical services. When a citizen is sick or injured, he demands prompt care by a doctor. If there is a shortage of well educated and highly trained physicians, he will not be too particular about the qualifications or kind of doctor who answers his call. Furthermore, most of our congressmen and state legislators probably would respond to their constituents' demands for

lowered practice requirements that would permit graduates of inferior foreign medical schools to become licensed to care for American citizens on an equal basis with graduates of approved medical schools.

FOREIGN GRADUATES

During World War II, when many physicians were mobilized with the armed forces, graduates of foreign medical schools were accepted as interns and residents, and some were licensed to practice in several states. Since the war, the number of hospitals has increased greatly and many additional training programs have been established until now there are many more internships and residencies available than there are graduates of medical schools. Likewise, during and after World War II, citizens noted a shortage of physicians in most communities. They were not always able to obtain medical attention as promptly as they considered desirable or necessary. Thus, under pressure from hospitals, physicians, and the public, Congress lowered the bars to immigrants that permitted an influx of foreign physicians, and at the same time a number of states allowed foreign graduates to be examined for licensure. The number of graduates of foreign medical schools that have been licensed to practice increased from 458 in 1950 to 1,316 in 1958, and these represent 17 per cent of the physicians who began practice in that year.

LOWER STANDARDS

Another facet of this problem is presented in the report of the Surgeon General's Consultant Group: "These figures raise the question of whether this country with its wealth should be dependent on other nations for a net inflow of physicians to serve the people, when there are so many urgent needs for medical service in other parts of the world. In no other field of education is there a situation in which the United States draws to the same extent on persons educated in other nations to maintain its high level of services."

Furthermore, the increasing number of graduates of foreign schools in our hospitals and communities may actually be lowering our standards of medical service to the public instead of maintaining a high level of service as suggested.

In addition to poorly qualified foreign physicians, there are others practicing in the country who have not graduated from approved medical schools. For example, osteopathic physicians are practicing in 41 states with few restrictions. In 1959 there were 14,000 doctors of osteopathy practicing in this country. From the six osteopathic schools there were 470 graduates in 1959. From surveys and reports of the Cline Committee to the House of Delegates of the AMA,[4] it is known that while the osteopathic schools as presently conducted do not measure up to the standards for an approved medical school, they could, with the help of competent M.D. teachers and additional financial support, qualify as approved schools of medicine.

Despite their cultism and inferior medical preparation, osteopaths are being accepted by the public and are being permitted in some areas to practice on an equal footing with doctors of medicine. This situation is undesirable and is unpalatable to the medical profession. Nevertheless, in view of the impending crisis in medical care that confronts the profession today, it would seem wise for the two groups to resolve their differences and set about improving osteopathic schools.

MISSISSIPPI'S PART

Having discussed the expansion of medical education that will be required to keep pace with the population increases between now and 1975, it can now be considered how the Mississippi medical fraternity might help meet the needs. Mississippi cannot afford to build and maintain a second medical school in the foreseeable future. However, the state should be able to provide additional funds, as they may be required, for expansion of the facilities of the medical school and hospital to enable them to accommodate larger classes. In order to obtain sufficient state funds for gradual expansion and improvements, members of the legislature must be convinced that the American people will receive inadequate medical care in a few more years unless expansion of medical teaching facilities is made possible, and that Mississippi must contribute its full share to this end. At the same time, the legislators should be commended upon the program of state scholarship loans and impressed with the need for its continuance. Legislators also should be informed that it is not considered wise to restrict the medical school admissions to citizens of Mississippi because such a restriction reduces the number of students, and lowers the scholarship standards.

It is time for all physicians to concern themselves with recruitment of good students for the medical schools. Experience has shown that the best time to awaken interest in a medical career is during the senior high school year and the first year in college. If there is to be an adequate num-

ber of high quality students applying for admission to medical schools in future years, physicians must make personal contacts with likely candidates in high school and college and endeavor to interest them in medical careers.

A CONCERTED EFFORT

Closer liaison between the medical schools and the state and local medical societies of their respective areas is essential for future progress and expansion of the schools. Petty differences that usually characterize the feuds between "the town and the gown" should be resolved so that a concerted effort can be made to meet future educational needs.

Your state representatives to the House of Delegates of the AMA can lend support to the Educational Council for Foreign Medical Graduates that is doing much to improve the quality of foreign students and graduates who come to this country for hospital experience, many of whom apply for citizenship and obtain licenses to practice.

Every physician in Mississippi should become well acquainted with the medical school and hospital. Once he becomes acquainted with the school, its faculty and its hospital, he will have real pride in it. If he is proud of the school and knows all about it, he will find it much easier to persuade his legislators to provide adequate funds and to interest more students in medical careers.

Undoubtedly, Mississippi can and will do its part towards providing adequate medical coverage for the greatly expanded population that is anticipated by 1975. Each member of the Mississippi State Medical Association has an obligation in this connection and must soon begin to do his part. ★★★

3503 Prytania Street

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MILITARY SPECIFICATIONS

An instrument manufacturing firm received plans and specifications from the Army Medical Corps with an order for specialized hospital equipment. Each page bore the cryptic notation "MIL TDD-41." Engineers were puzzled and technical data files furnished no answer. A hasty long distance call was placed to the Office of the Surgeon General. "Will you please tell us what 'MIL TDD-41' means?"

"Sure, I'll tell you," drawled a senior medical officer. "It means 'Make it like the damn drawings for once.' "

Clinicopathological Conference VIII

Conducted by the Department of Pathology
Mississippi Baptist Hospital
Jackson, Mississippi

CPC VIII concerns a 65-year-old white male with a history of abdominal distress for five to six years. He was not disabled and had carried on his normal activities as a business executive without difficulty. Primary complaints were postprandial mid and low abdominal fullness, mild cramping, slight abdominal distention, borborygmus, eructations, and the passage of flatus. Participants in the discussion are Dr. Joseph P. Melvin, Jr. and Dr. Kenneth Heard.

THIS 65-YEAR-OLD WHITE MALE was seen on November 23, 1959, desiring a complete check-up. He stated that he had been having abdominal distress rather continuously for five to six years which had been getting progressively worse, although it was far from disabling. He was able to carry out his normal activities as a business executive without any difficulty. He had been examined elsewhere previously and had been told that his symptoms were due to sigmoidal diverticulitis.

COMPLAINTS

The complaints consisted of postprandial mid and low abdominal fullness, with mild cramping, slight abdominal distention, borborygmus, eructations, and the passage of flatus. Relief was best obtained by either massaging the abdomen or taking an enema. There had been no nausea, vomiting, heart burn, regurgitation, back pain, anorexia, weight loss, qualitative dyspepsia, jaundice, or colic. He denied blood, pus or mucus in the stools. He did not have diarrhea. The stools were described as always being a normal tan color.

The patient appeared to be a meticulous type of individual and was considerably concerned about himself. He did admit to a great deal of nervous tension and anxiety. Whenever he became nervous, his symptoms seemed to be worse. The symptoms would persist for 45 minutes to two hours after eating. During this time he felt that his pulse was racing, his face felt warm and flushed, and he felt generally weak and nervous. He specifically denied any heat intolerance. One examiner noted a history of flushing of the upper half of the body.

Systemic review was otherwise negative except that a previous diagnosis of "low grade diabetes" had been made by another physician and a history of slight prostatic hypertrophy was obtained. The family history was entirely noncontributory.

On physical examination, the patient was a well-developed, well-nourished, somewhat plethoric appearing white male in no acute distress. Blood pressure was 140/80 in both arms, his pulse was 72, and his temperature was 98.6° F. The head, eyes, ears, nose, throat, mouth, and neck were negative. The heart size and rhythm were normal, and no abnormal sounds were heard. Examination of the chest was negative.

LIVER EXAMINATION

The liver was palpable three finger-breadths below the costal margin. It was smooth, firm, and slightly tender. No nodules were felt. There was no enlargement of the spleen or kidneys, and no other masses or tenderness were encountered. Peristalsis was normal. The prostate was moderately enlarged, being smooth and firm. On rectal examination, combined hemorrhoids and a small posterior fissure were noted. The extremities were negative except for small ectatic venules on both legs. The reflexes and peripheral circulation were entirely normal.

A routine urinalysis revealed a trace of sugar and two to four white blood cells per high power field. The reaction was acid, the specific gravity

1.020. The hemoglobin was 13.9 gm., the red cell count 4.52 million, and the white cell count 8,300. Differential revealed 27 per cent lymphocytes, 5 per cent monocytes, 62 per cent neutrophils, 4 per cent eosinophils, 2 per cent basophils, and 1 per cent band cells. The sedimentation rate was 30 mm. in one hour. A chest x-ray was interpreted as being within normal limits. A 12 lead electrocardiogram was entirely normal.

Liver function studies revealed a BSP retention of 4 per cent in 45 minutes, total bilirubin was 0.4 mg. per cent. Alkaline phosphatase was 11.4 Bodansky units, thymol turbidity three units, cholinesterase 62 units, and the cephalin flocculation was negative. A glucose tolerance test revealed a fasting blood sugar of 97 mg. per cent, 185 at 30 minutes, 200 at one hour, 242 at two hours, and 152 at three hours. The urine contained three plus sugar at one and two hours and two plus sugar at three hours.

X-rays of the upper gastrointestinal tract revealed no evidence of intrinsic disease in the esophagus or stomach. The duodenal cap was normal in appearance. The duodenal loop presented no abnormalities. Rather marked hypermotility was evident. Within 45 minutes the head of the barium column had already reached the mid-transverse colon. X-rays of the small intestine revealed no evidence of intrinsic disease. X-rays of the colon revealed a few sigmoidal diverticula without evidence of diverticulitis.

A 24 hour urine specimen was strongly positive for five hydroxy indole acetic acid. This study was repeated with the same strongly positive findings. An operation was performed.

CLINICAL DISCUSSION

Dr. Joseph P. Melvin, Jr.: "This is a 65-year-old white male seen for a checkup, who stated that he had been having abdominal distress for five to six years. He had been previously examined and had been told that these GI symptoms that he had been having were due to diverticulitis. These consisted of postprandial mid-abdominal and low-abdominal fullness, mild cramping, slight abdominal distention, borborygmi, gaseous eructations, and the passage of flatus. He had obtained relief by either massaging the abdomen or by taking an enema. There was no nausea, vomiting, heartburn or regurgitation, no back pain or anorexia, no weight loss, qualitative dyspepsia, jaundice, colic or bowel abnormalities other than the above, and he denied blood, pus or mucus in the stool. The stools were described as being tan in color.

"The patient was described as being meticulous, nervous, and quite anxious. He himself admitted that when he became nervous his symptoms became worse. The symptoms would persist for 45 minutes to two hours after eating, and he would feel his pulse racing and his face becoming warm and flushed and he would become quite weak and nervous. He denied any heat intolerance, however. One examiner had noticed the history of flushing of the upper half of his body. He had had a cholecystectomy 20 years previously, his appendix had been removed 25 years previously, and his tonsils had been removed.

FINDINGS

"The physical examination was not particularly revealing with the exception that the liver was enlarged three finger-breadths below the right costal margin and was smooth, firm, and tender. No nodules were felt. The prostate was moderately enlarged, and combined hemorrhoids with a small fistula posteriorly were discovered. The extremities were negative except for ectatic nodules on both legs. The routine urinalysis showed a trace of sugar, two-four pus cells per high-power field, and was otherwise negative. A hemoglobin, red count, white count, differential white count were all normal and the sedimentation rate was elevated slightly to 30 mm. per hour. The chest x-ray was normal, and a 12-lead electrocardiogram was normal. A liver function battery, with the exception of an alkaline phosphotase of 11.4 Bodansky units, was normal.

"The glucose tolerance test revealed a fasting blood sugar of 97, 185 at the half-hour, 200 at one hour, 242 at two hours and 152 at three hours, a glucose tolerance curve quite suggestive of the curve seen in extensive liver disease. The urine contained 3+ sugar at one and two hours and 2+ sugar at three hours. The proctoscopic examination revealed combined hemorrhoids and x-ray showed a few sigmoid diverticula.

LAB WORK RESULTS

"The lab work was climaxed by the diagnostic findings of a strongly positive test for 5-hydroxy indole acetic acid in a 24 hour urine collection. The study was repeated with the same strongly positive findings. Dr. Heard has told me that the diagnosis was obvious in this case, and I believe that the two positive 5HIAA urine tests bear out his statement. There are other conditions which cause an increase in 5HIAA in the urine, such as carcinoma of the larynx, carcinoma of the trachea, certain malabsorption syndromes, and banana ingestion, but none give the high titer on qualitative tests as is indicated here. The quantitation of the 5HIAA reveals that the so-called normal limits

of 0 to 9 mg/l. for 24 hour urine specimens sharply delineates 98-99 per cent of normal people and that in the above mentioned diseases in which elevations are present, 2-25 mg/l. for a 24 hour urine specimen is about average. A strongly positive qualitative test would seem to eliminate these, especially as no clinical pathology to suggest such conditions was mentioned.

CARCINOID DISEASE

"So this leaves us with a diagnosis of carcinoid disease with gastrointestinal and vasomotor symptomatology, but without any definite evidence of cardiopulmonary involvement. This is an extremely fascinating disease, interesting to me because it is utterly logical in all respects. It is a disease of pure chemistry. During the last few years, several groups of investigators have studied vasoactive substances from animal tissues. From these studies have emerged a number of interesting facts relating to a substance found in enterochromaffin tissues and called enteramine by Spamer and serotonin by Rapport. Chemically, it has been identified as an indole derivative, 5-hydroxytryptamine, and among its other vasoactive effects, the elevation of pressure in the pulmonary artery was noted in some animal species when injected intravenously. It has also been shown that the substance causes bronchial constriction. The intestinal peristalsis increases strongly after a short period.

RELEVANT STUDIES

"Spamer also mentions that the skin of a rat becomes red after injection of enteramine, a direct analogy with the so-called 'flush' in a human. The enteramine is probably rapidly destroyed in the body, this destruction taking place in the liver, and hepatic insufficiency may increase the effects of enteramine. Thorson was the first to suggest that carcinoid syndrome might be due to overproduction and release of serotonin, and Lembeck actually analyzed a carcinoid tumor and found this to be true. The postulate of Thorson is also strengthened by the above mentioned facts of serotonin's potent pharmocologic effect on smooth muscle of the blood vessels, bronchi and intestinal tract.

"The clinical syndrome of malignant carcinoid of the small intestine with metastasis to the liver results in peculiar cutaneous flushes and cyanosis of the upper half of the body, chronic diarrhea, and other gastrointestinal symptoms of a nonspecific nature, respiratory distress strongly emulating asthma and valvular disease of the heart whereby pulmonary stenosis and/or tricuspid stenosis or insufficiency is present. The previous studies in the laboratories of the National Heart Institute have shown serotonin is derived from the essential amino acid, tryptophane, that normally, no more then 1 per cent of tryptophane is converted in enteramine (or seratonin) and that the end product of the metabolic process is 5-hydroxy indole acetic acid or 5-HIAA. This 5-HIAA is excreted in the urine and can serve as a quantitative index of this route of metabolism.

"Almost all of the recognized cases of malignant carcinoid of the small intestine have been characterized by the nonspecific gastrointestinal symptoms. In most of these cases, metastasis to the liver with obvious hepatomegaly and probably failure of the hepatic inactivation of enteramine with the consequent vasomotor reactions have been present. In only about 50 per cent of the cases have cardiopulmonary involvement been present, and it seems that this case is rather typical in that the heart and lungs are not involved.

MECHANISM OF CHANGES

"Two theories exist at the present time as to the mechanism of these changes, one being that the damage to the right heart is secondary to pulmonary vasopressor surges which are secondary to the release of large amounts of enteramine. However, this theory has its weakness, in that other conditions characterized by persistent pulmonary hypertension fail to produce any changes in the right heart similar to the carcinoid disease.

"The second theory postulates the fact that large amounts of enteramine circulating in the blood have a direct fibro-sclerotic action on the right heart, but as the blood passes from the right heart into the lungs, it is inactivated by the rather extensive monoamine oxydase enzyme system present there. Again, this is all very logical and fits quite well with the rare cases in which a carcinoid tumor of the lung feeding into the pulmonary veins and thence into the left heart produced these same recognized pathological changes in the left ventricle, particularly in the mitral valve. However, blood samples taken from the right and left heart failed to show any appreciable difference in the amounts of enteramine. If this was a direct fibro-sclerotic action of enteramine, equal amounts of enteramine in both sides of the heart would produce equally distributed pathological changes.

"These patients do very well, even with extensive metastasis to the liver, the average duration of life being as much as five or six years. Several cases have been reported as living 20 years following the demonstration of liver metastasis. A few of these patients go into right heart failure or develop the picture of cor pulmonale, but the majority die by virtue of secondary infection, inanition, and nutritional problems. In summary, I would diagnose carcinoid disease, primary in the small bowel, with metastases to the liver, but with no cardiac or pulmonary involvement."

PATHOLOGICAL REPORT

Dr. Kenneth Heard: "At operation, the surgeons found a small tumor roughly at the junction of the jejunum and ileum. Approximately 12 cm. of small bowel and adjacent mesentery were resected. It was also noted that the liver was studded with small metastases.

"On pathological examination a small yellowish-tan tumor measuring 1.4 cm. in maximum diameter after formalin fixation was found. Microscopically this showed a characteristic pattern of a carcinoid tumor, or argentaffinoma. Throughout the wall in the involved portion were ribbons, strands and sheets of small uniform cells.

"I might add to Dr. Melvin's excellent discussion that a few cases of carcinoid syndrome have been reported associated with carcinoids arising in an ovarian teratoma. Actually in the reported cases there have not been associated liver metastases. The fact that the syndrome occurs in such cases is explained by the venous drainage directly into the inferior vena cava, thereby bypassing the liver with failure of inactivation of the serotonin."

Final Diagnosis: Carcinoid (argentaffinoma) of the small intestine with liver metastases and hyperserotoninemia. ★★★

1190 North State Street

"CLOUD BABIES": NEW ANSWER TO OLD PROBLEM

Dr. Heinz Eichenwald has come up with a new solution to the old problem of hospital nursery epidemics.

One of the nation's leading pediatric authorities, Dr. Eichenwald says that some newborn infants are highly infectious to others, and are literally surrounded by clouds of bacteria. Using new quantitative methods of air sampling, he found that these infants are an important factor of staphylococcal infection.

Dr. Eichenwald, writing in the August issue of *JAMA*, suggests these solutions to the problem of the "cloud babies": small nursery units of adequate size designed to permit forced ventilation with frequent air changes and the reinvestigation of the use of ultraviolet light because of its potent antiviral and antibacterial effect.

Ainsworth

Ireland

Gray

Blakey

VENEREAL DISEASE: IS I

Is venereal disease, once thought tamed by modern antibiotics, once again on the upsurge?

"YES," says Dr. Morris Fishbein, editor of the new *Medical World News*. "Even the recorded cases are rising—especially among teen-agers."[1]

"YES," writes Robert S. Bird, honorary life member, American Social Health Association, in the October, 1959, issue of *Parents' Magazine*. "For the third consecutive year in the United States, the incidence of teen-age syphilis and gonorrhea has risen."[2]

"YES," says T. Lefoy Richman, associate executive director of the American Social Health Association. "In the United States where intensive efforts to prevent VD have been actively under way since 1936, about 60,000 cases of syphilis occur each year. . . . It is apparent that drugs don't stop VD in the population."[3]

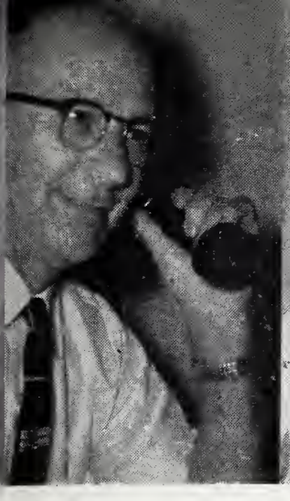
"YES," maintain the Association of State and Territorial Health Officers, the American Venereal Disease Association, and the American Social Health Association. "Twenty-nine states and 49 major cities now record increases in early infectious syphilis. . . . The Federal appropriation of $5.4 million for VD work is seriously inadequate."[1]

"YES, YES, YES," proclaim magazine and newspaper feature writers, "and the fault lies with today's teen-agers."

In an effort to see where Mississippi stood in this apparent resurgence of VD, Journal MSMA interviewed state health officials, educators, physicians, juvenile workers, and clergymen. The general consensus of opinion: Venereal Disease has increased only slightly, if at all, in the state. However, the incidence is high in the teen-age group.

Dr. A. L. Gray, executive officer of the State Board of Health, feels that the increase is possibly more apparent than real. He said, "During 1955-58 a good many other states who were 100 yards behind Mississippi started doing detailed investigative work we had been doing for years. They uncovered more primary and secondary syphilis than they had previously and this made it look like a rise." However, Dr. Gray observed that Mississippi may have had a "little upsurge" among the young people in the past three years. He said there have been several outbreaks involving teen-agers.

Editorial Assistant, Journal of the Mississippi State Medical Association.



Boone

Riley

Davis

Osborne

NCREASING IN MISSISSIPPI?

BETTY MILLER
Jackson, Mississippi

Questioned on the future, Dr. Gray predicted, "If we maintain the existing pressures, there is not going to be any very marked resurgence in VD in the state—assuming the teen-agers don't get any more lax than they are at the present time."

Dr. Gray, who headed the venereal disease division for many years before becoming state health officer, blamed any rise in VD on increase in immorality among today's teen-agers.

"Today's young folks do things that youngsters of a generation ago would never have been allowed to do. They take off for out-of-town football games and picnics without chaperons and generally get involved in situations that can lead to trouble," he said.

Another factor, said Dr. Gray, is the de-emphasis on the home. Mother, father, and the children are all more concerned about community activities than their home, he said. "Some folks would save the world and then save the home," he observed, "but it just can't be done that way."

Nationally known for his work in venereal disease control, Dr. Gray is presently serving as the only state health officer on the national Advisory Committee on Venereal Disease Control. The committee, established to investigate the apparent increase, is "looking at the current state of the problem and the future in research, diagnosis, treatment, and vaccine," Dr. Gray said.

Another state health official, Dr. Durward L. Blakey, director, Division of Preventable Disease Control, termed the present increase "just a hump on the horizon." He, too, felt that the rise was only apparent and saw no future epidemics in the state.

Howard E. Boone, health program representative, pointed out that VD had consistently decreased in Mississippi for the last decade. However, he said that the number of infectious cases of syphilis reported in the first six months of 1960 exceeds that reported in the first six months of 1959. Thirty-one cases of infectious syphilis were reported from January-June, 1959. By June this year, 53 cases had been turned in.

What do the statistics show? Generally speaking, the figures demonstrate that VD, nationally and locally, began decreasing after 1947, the peak year nationwide. The incidence of both syphilis and gonorrhea in Mississippi has decreased steadily to the present. Although gonorrhea on a national level has decreased consistently,

total reported syphilis showed a rise in 1956, 1957, and 1959. Both national and state statistics show a predominance of cases in the teen-age group.

STATISTICS

Statistics may be presented any number of ways, but perhaps the best method of comparing disease incidence is rates per 100,000. In 1948, the national rate per 100,000 for total syphilis was 234.7. Mississippi's rate was 483.8. These rates decreased until in 1959, the national scene showed a rate of 69.3 per 100,000 for total syphilis, while Mississippi had dropped even farther to 32.6

In the peak year, 1947, the nation was reporting a total of 372,963 cases of syphilis a year, while Mississippi was seeing about 17,946.

The public health service reported 121,598 cases of syphilis nationwide in 1959, and 241,004 cases of gonorrhea. In the same year, Mississippi saw 533 total reported cases of syphilis and 6,259 reported cases of gonorrhea. In 1959, Mississippi's rate of 3.5 VD cases per 100,000 population was lower than that of any neighboring state.

NOT THE COMPLETE PICTURE

Statistics don't show the complete picture, however. For the most part, the figures represent cases discovered by the county and state health departments. Only a minority of the patients of private doctors are reported to the state health departments. Studies show that in some areas private physicians are reporting to health authorities as little as 5 per cent of the syphilitic patients they treat. However, other areas report as many as 50 per cent. It is estimated that approximately 25 per cent of all privately treated syphilitic patients are reported to health departments.[4] Boone estimated that about 10 per cent of the total number of reported cases in Mississippi was turned in by private physicians.

Taking account of unreported cases, the Public Health Service estimates that about 60,000 new cases of syphilis occur each year and 1,000,000 or more cases of gonorrhea.

PLATEAU OF CASES

In the period 1955 to 1958, the trend of reported infectious syphilis levelled off and reached a plateau of 6,500 to 6,800 new cases per year. Experts in the venereal disease control field have suggested several factors that might explain the plateau. These include de-emphasis of VD control activities in many states, complacency among public health officials and private physicians or a possible levelling off of the true incidence of syphilis. In 1959, reported infectious syphilis rose to 8,285 cases—an increase of 22.7 per cent.

In the United States during 1958, 22.4 per cent of the reported infectious venereal disease cases occurred among persons under 20 years of age. In some states, one out of every three infectious venereal disease cases reported was a child or a teen-ager. This proportion has increased significantly for the past three years.

RISE IN YOUNGER GROUP

Of the age groups under 20, the rise is greatest in the 10-14 group. In 1958, this group had a 14.3 per cent increase over the number of cases reported in 1957. In the 15-19 age group, there was an increase of more than 5,000 cases between 1957 and 1958, an increase of 11 per cent. More cases of venereal disease in women occur at age 18 than at any other year.

It is estimated that the United States has an annual VD-infected population of 200,000 under 20, with reported teen-age infectious venereal disease cases occurring at a national average of one every 10 minutes.

During 1958 in Mississippi, 21 per cent of reported infectious syphilis cases and 28 per cent of reported gonorrhea cases were under 20. In 1959 it was 24 per cent for syphilis and 25 per cent for gonorrhea. Since 1955, over 50 per cent of the reported VD cases have been under 24.

GRASS ROOTS OPINION

To get a practical interpretation of the statistics, JOURNAL MSMA interviewed the men on the grass roots level—county health officers, VD investigators, urologists, and general practitioners—who see the VD problem on a face-to-face basis.

Dr. George Riley, Hinds County health officer, reported that venereal disease is "definitely increasing"—especially among the teen-agers. There is nothing approaching an epidemic, but there has been a definite increase in the county since the first of the year," he said.

Mack Davis, special venereal disease investigator assigned to Hinds, Madison, and Lee counties, saw an increase in infectious syphilis. He reported that there were more cases in Hinds than the other two counties at present.

A Jackson urologist, Dr. Temple Ainsworth, said he rarely saw venereal disease cases any

more. "About 1939," he said, "I was seeing from 25 to 35 new patients with gonorrhea each month. However, since the introduction of penicillin, I only see a maximum of four patients a year."

Dr. Ainsworth felt that the extreme drop-off might be due in part to the easier treatment made possible by modern drugs. "Back when treatment was difficult and involved," he explained, "most cases of VD were referred to the urologists. Today, one or two shots will cure the patient and there's not any need for referral."

Dr. Robert B. Ireland, a Clinton general practitioner, reported that he had seen only sporadic cases in his practice. "In fact I have not seen one case of syphilis in the last five years," he said.

TEEN-AGERS AT FAULT?

The statistics seem to show that the teen-agers are at fault for the increase. To find out about this, the JOURNAL talked to John Osborne, Jackson youth counselor, and his assistant W. T. Calhoun. Osborne, who has worked with Jackson's young people for the last 13 years pointed out that there has been a general increase in immorality among the younger group in the last few years. "We see more drinking, unwed mothers, and sexual promiscuity today than we did ten years ago," he said. "So it stands to reason there would be more venereal disease among the teen-agers."

Calhoun placed part of the blame for the teensters laxity on increased sex emphasis in movies, magazines, TV, and dress apparel. "Teen-agers are molded by what they see and read," he said.

The juvenile counselors also blamed the breakdown in the American home for many teen-age problems. "There is a lack of unity in the home, and often the teen-ager has to go outside of the home to learn about sex. This leads to experimentation," they said.

NO SERIOUS LAPSE

Dr. Douglas Hudgins, pastor of the First Baptist Church, Jackson, saw no serious moral lapse among today's teen-agers. However, he pointed out several factors which make adjustment difficult for today's youngsters: (1) the necessity for both parents to work in order to maintain the desired standard of living, (2) the deviation between the conduct of the parents and what they and the church teach the children (3) the easy freedom of social customs allowing dating at an earlier age and less chaperonage than a generation ago, (4) increase in outdoor life—boating, skiing, weekend recreation trips, camps, lodges—which lead to taking each other for granted.

Dr. Hudgins said that he had observed a slight moral lapse in the last six years resulting in forced marriages among very young persons. "However," he pointed out, "I have a tremendous admiration for the young people in this town. They amaze me with their talents, achievement, and their high moral standards."

CLUSTER TESTING

What is the answer to the VD problem? From the purely practical standpoint, venereal disease can be held far below the epidemic stage by present methods of case finding and treatment. Mississippi is one of 31 states to use the modern "cluster testing" procedure. Each case is interviewed not only for his contacts, but also for friends he suspects may have VD and their associates. If one person in a group is diseased, it is probable that the entire group has been exposed.

PREMARITAL LAW

In 1957, the legislature passed a premarital law requiring blood tests. Although the primary purpose of the law was to cut out "quickie" marriages, its secondary function was to catch any undiscovered cases of venereal disease. Health officials feel that this provision will probably be worthwhile for several years, but after that the number of cases found will not be enough to warrant the time and expense of mass blood testing.

In the first year of operation of the law, July 1, 1958, to June 30, 1959, there were 33,803 blood tests given. Out of these, 816 were reactive. Eighty new cases were brought to treatment for the first time, 106 were returned to treatment, and 466 were diagnosed as having had adequate treatment.

Some workers with the VD problem feel that the disease will be wiped out only when a vaccine is discovered. Presently, promising research is being conducted in this direction. Dr. Gray predicts a vaccine may be found within the next 10 years.

MOST ALARMING ASPECT

Perhaps the most alarming aspect of the venereal disease situation is its predominance in the lower age groups. This is seen by youth workers as a symptom of social maladjustment. Writes T. Lefoy Richman, "The increase in VD among young people should be regarded as one of the

elements of a pattern which includes increasing illegitimate parenthood at young ages, increasing mental health problems, and increasing juvenile offenses."

EDUCATION—THE ANSWER?

Richman and other writers feel education is the answer. Two administrators in the Jackson school system, Dr. Harry S. Kirshman, and R. B. Layton, felt that the education should begin in the home. Dr. Kirshman, assistant superintendent, said, "The school has a responsibility in sex education. However it must be a cooperative effort between the school and the home."

Layton, curriculum director, explained that basic sex education was given in biology and science classes and in gym classes, but that a definite program on VD education would be given only upon request of the parents."

He said, "This program should be a joint responsibility of the home, school and church. It should be handled by the community, rather than by the classroom."

SUMMARY

Venereal disease appears to be on the rise nationally. State health officials predict that Mississippi will remain below the national incidence rate because of its modern methods of casefinding and treatment.

As Dr. Gray puts it, "It is not necessary to worry about wiping out venereal disease. We have never eradicated a contagious disease—for example, yellow fever is still prevalent in other countries. There is presently little chance of eradicating VD, but we can stabilize at a low level of occurrence if we keep on seeking cases on a selective basis and if we have the cooperation of local physicians. When we get a vaccine, then we can think about eradication."

Perhaps the most alarming thing about the rise in VD, is the high incidence in the younger age groups. Youth workers say this is a "symptom of the times," and is also reflected in other deviant behavior. They suggest education, beginning in the home and continuing in the school and church, and greater emphasis on home unity as a possible solution. ★★★

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THE IDLE AGING

Former President Herbert Hoover, 85, may be an exception to the rule but he proves by doing that there need be no "enforced idleness" in the golden years. Last year, at age 84, he toted up the score on another year of his retirement: Delivered 30 speeches, answered almost 56,000 letters, traveled just under 23,000 miles including a trip to Europe, wrote a book, *The Ordeal of Woodrow Wilson,* and kept four secretaries and a research assistant busy 10 hours a day. He says he'd have gotten more done if he hadn't been forced ". . . to spend two weeks abed after the doctors took out my gall bladder."

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Preschool Immunization: The Case for Local Autonomy

I

". . . to require upon the recommendation of the State Board of Health, and the County Health Officer in whose health jurisdiction the school rests, the vaccination of school children against smallpox, typhoid fever, poliomyelitis or other contagious or infectious diseases. . . ."

So reads paragraph 9, section 4, of the Montgomery-Garmon Act, Senate Bill 1560, by which the 1960 regular session of the state legislature extended the fight against childhood and infectious diseases. More than ever, as one wag has observed, starting school will have its points for Mississippi youngsters, but despite the transitory discomfort of the vaccination needle, many more will be spared illness. While the new law was not sponsored by medical organization or the State Board of Health, few physicians will quarrel with its primary intent.

II

Some refer to the Montgomery-Garmon Act as a compulsory immunization law but nothing could be farther from fact. It is an enabling authority to permit local school district boards of trustees to order compliance where certain conditions prevail. Even so, exceptions are permissible for those whose religious beliefs are such as to oppose immunization and, of course, where a physician advises that immunization is contraindicated.

Nor will the new law provide a panacea for childhood disease but rather is, as Dr. A. L. Gray, State Board of Health executive officer, suggests, the kind of proposal that is generally attainable in helping to foreclose the hazards of epidemics and serious outbreaks in our schools. On this premise, the State Board of Health recommends adoption and enforcement of the measure locally. The recommendation is based on the concept that minimum requirements should be established for community protection rather than maximum protection for each individual.

A model order drafted by the attorney general for school trustees to consider suggests smallpox vaccinations at intervals of not less than five years, three poliomyelitis immunization injections, and three injections for protection against diphtheria, pertussis, and tetanus.

III

"I am sure there will be some differences of opinion among physicians about these proposed minimum requirements," Dr. Gray said as he advanced the concept of minimum community rather than maximum individual immunity pro-

tection. "We believe that the proposed schedule of immunizations will forego the possibility of epidemics and serious outbreaks in schools but recognize at the same time that immunity is a relative matter with tremendous variations from one individual to another in their abilities to develop complete protection and retain it—regardless of the schedule of immunizing agents used," he said.

What Dr. Gray suggests is a practical way to achieve a basic level of protection against smallpox, poliomyelitis, and the other diseases. This is a logical, reasonable approach from the viewpoint of preventive medicine. The private practitioner is concerned first with the individual and it is within his sphere of professional interest and responsibility to consider the patient and his maximum protection. And the private physician should play the leading role in providing immunization rather than local departments of health. In becoming the primary source of preschool immunization care, the private physician should maintain comprehensive records not only for legal purposes but as future aids in diagnosis and treatment of the child.

Public health authorities do not feel it desirable to include typhoid vaccination as a requirement in all areas of the state. Recent experience and epidemiological studies in this connection may make such inclusion desirable in stated areas, subject to action by local school trustees and public health officers.

IV

Enforcement of the law, where adopted, is a responsibility of school trustees, never of public health authorities. Because of the obvious health implications in the law, component medical societies of the association should find it a proper matter for early discussion. Views of the local professional community should be freely and openly expressed to school authorities and district boards of trustees. The Mississippi State Medical Association believes that health maintenance is first a matter of personal responsibility but laws concerning health are always matters of community interest and a professional concern to each private physician.—R. B. K.

Lop-Sided Logic

The socialists carefully avoid socializing themselves. This is the thesis of a penetrating editorial by the astute Howard E. Kershner, editor of *Christian Economics,* who explores the simple truth that no man gores his own ox. Everybody knows that the true, dedicated disciple of socialism wants to distribute the wealth but it's equally well known that the distribution would be made from the other man's substance—not that of the advocates.

"Labor gets about 85 per cent of the money spent for personal consumption," says Mr. Kershner. "Socialists are therefore aiming their fire at the other 15 per cent, claiming that it should be paid to labor. If this could be done, it would not add much to the remuneration of labor. If payment is not made for providing the tools, machines, and factories necessary for production, there will be no incentive to save; equipment will deteriorate and production will decline with the result that *labor will earn much less.*"

Reuther, Galbraith, and Cohen pour vitriolic harangues upon business and professional people earning, say, $15,000 per year but they say nothing about their unionist airline pilots who are paid $30,000 annually. Labor's philosophy, thus, seems to lay rewards at the feet of those without the skills, providence, and imagination of the few who take the risks to organize production and services. Especially is this true of the professional person who spends years in preparation for the assumption of grave responsibility in providing a unique service. "In a free market society," Mr. Kershner declares, "the most capable men achieve the top positions in organizing productive processes. Experience has shown that they do it much more effectively than the state can do it and that the amount required in profits to encourage their efforts and to build up the capital equipment necessary for greater and greater production is very much smaller than the amount the state would have to withhold from all workers in its effort to acquire the necessary capital."

The same logic may be applied to the acquisition of professional skills. Only through personal dedication, self-denial, and the willingness to forego security of the ordinary are physicians, attorneys, engineers, architects, and accountants trained. The clincher is this: "If the laborer is to receive the fruits of his labor, why not the saver the fruits of his savings and the entrepreneur the fruits of his planning and management? If one is to be socialized, why not the other? If the private property of the saver, the planner, and the organizer are wrong, the private property of the worker is equally wrong."

This is the lop-sided logic of those who seek the fruit of the other man's work. These are the people who are sawing the limb on which they're sitting just to get "free" lumber. But while they pursue their shortsighted ends, they are careful not to socialize themselves.—R. B. K.

Dean David S. Pankratz

ARTHUR C. GUYTON, M.D.

Jackson, Mississippi

Dr. David S. Pankratz has served as dean of the University of Mississippi School of Medicine for 15 years, having begun his duties in this capacity in 1945 at the close of World War II. For the past five years he has also served as director of the University Medical Center. Now that he approaches the state compulsory retirement age, his energy and spirit have driven him to resign his positions as dean and director to enter the practice of psychiatry in association with a Memphis hospital. Though this represents a new phase of medicine for Dr. Pankratz, it is entirely in keeping with his still effervescent youthfulness that he should choose a new career rather than accepting the placidity of retirement.

But now that his tour of duty as dean and director is approaching an end, it is particularly appropriate to take note of the many advances of the medical school and medical center under his directorship, as well as of the many problems that have beset his path.

When Dr. Pankratz became dean in 1945, the medical school had an enrollment of 30 new students each year, with only a two-year program and a budget approximately one-twelfth that of the present school or one-twenty-fifth the budget of the entire present medical center. Today the school admits 80 students to its first year class, has a graduate program that will eventually accommodate 75 to 100 students, a graduate nursing training program that is designed to give training to 150 students per year as it grows, training programs for laboratory technicians, x-ray technicians, and physical therapy technicians, and trains each year 23 interns and approximately 70 residents.

Aside from this, the medical school has begun to attract postdoctoral fellows from all over the world. The school also receives nearly $1 million annually of out-of-state support for research and training programs, and a new $3 million research plant is to be built during the ensuing three years, half of this supported by a $1.5 million grant from the National Institutes of Health.

This is the progress that has come about in 15 years, but it has not been achieved with ease. The beginning task in 1945 was to make room for the returning veterans from World War II, which required an immediate doubling of the staff of the school as well as of the student body. Almost at the same time, the state of Mississippi began its medical scholarship program to support medical students who would later return to the small communities of the state for service as community doctors. But in the back of the minds of great numbers of doctors as well as other leaders of the state was the idea that a state medical center was desperately needed to serve the medical needs of the state. Actually, many factors mitigated against the advisability of building such a center, particularly much concern about the ability of the state to support the center. But public pressure and Dr. Pankratz's indomitable faith in its necessity were the two principal factors that brought about this major step. The course of events in the past five years has proved the wiseness of this move.

Since the Medical Center opened in 1955, Dr. Pankratz has led a persistent fight for its adequate and continuing support, and he has proved to the state that every cent of money invested in the center is rewarding the state many times over.

To summarize a long history of achievement in honor of Dr. Pankratz's retirement, we can merely show as concrete evidence the large edifice called the Medical Center and inside its walls a tremendous functioning unit composed of nearly a thousand workers in the various fields of medicine, providing service for the state and training for its citizens that will continue indefinitely into the future. This is our memorial to Dr. Pankratz.

It is with regret that we see Dr. Pankratz leave, but it is also with our admiration that he has chosen to take a course which will keep him active in medicine for a long time to come.

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The Image of a Man

In another column of this issue, we have paid tribute to the man who has stepped down from the most important office in the field of medical education in Mississippi. It is occasionally necessary to pause momentarily for a backward glance at a significant milestone, and if the monument casts a beam toward the future, such as this has done, we can be assured that another valuable tradition will be in the making. We frequently overlook the effect of tradition and do not ascribe the full implication of tradition to present day endeavors. However, the entire character of medicine is interlaced around tradition—the tradition of ideals, of morality, of purpose—the elements that have established the standards of our profession.

The dean of a medical school embodies this tradition. The character of the medical school inexorably reflects the character of the dean and we must consider the qualifications of the man we will address in this capacity. The Mississippi State Medical Association is vitally concerned with the progress of medical education in its state university. To ignore this fact is to overlook one of the most important responsibilities of medical organization. The general excellence of the medical schools in the United States is due in no small measure to persistent surveillance by the profession. From Flexner to the present, medical organization has insisted on continuous upgrading of standards in medical education.

The officials of the University will have to set themselves to the task of selecting a dean, a most important responsibility. Fortunately, they will have a pattern to which they can refer. Deans of great medical schools have possessed qualities which have not only identified these men as unusual personalities but have made their medical schools great also. Our medical school is young. We need a man who is young—a man with vigor and energy. This man must be devoted to the precepts of medical education. He must possess the full understanding of an adequate medical education so that we will never be in danger of lowering the direction of our school to the level of mere vocational training. He must be a man who generates respect—not the kind that comes from fear—but the kind that accompanies achievement and idealism. This must be more than a job, more than a vacancy to fill. He must be as much a part of this as it is a part of him. It has to be his career.

This man should have an interest that will keep him productive. Our most illustrious deans have been men with a strong interest in one aspect of medicine or research. This is highly desirable because it sets the pace for assiduity and earnestness within his own school. Besides these qualities, this man should have a deep respect for medicine as a profession. He must realize that the four brief years that are within his jurisdiction should confer primarily the desire for further education. Learning should not stop with the degree. Advancement should not cease with a certificate. His respect for medicine must necessarily extend into the ethics of medicine, and he must be able and willing to confer a strong ethical sense to his students. If he is of proper stature his students will feel his influence to an increasing degree as the years pass after graduation.

This is a glance at the person we must have as dean of our medical school. Obviously this describes a man of great stature and it is possible that he will not be easy to find. However, if our school is to take its place along side of the other great medical schools of our nation, we must have this man. The general caliber of the medical profession really is determined by the dean of the medical school. We cannot settle for less because even starting with these criteria, he must also be capable of growing to meet the purpose of the office.—T. J. M.

A New Climate Of Mutuality

Relationships between practicing physicians and the National Foundation have been subjects for discussion in the highest councils of medical organization. And lively discussions they were, too, because not everybody sees the National Foundation—or any other voluntary health agency—alike. The outcome was interesting, if not virtually unique, because the American Medical Association adopted a guide for physicians involved in the medical care program of the National Foundation during the recent Miami Beach annual session.

Without acrimony or innuendo, the AMA House of Delegates hammered out a common-sense statement which is as candid as it is reasonable. What's more, the delegates directed that it be transmitted ". . . to all constituent (state) associations with the recommendation that (it) be adopted by all component medical societies."

To begin, members of National Foundation chapter medical advisory committees should be selected from among those named by the local medical society. This is nothing new in Mississippi because the state association has felt for years that any organization wishing to be advised by physicians shouldn't select its own advisers. Further, says the new AMA policy, the medical advisory committee should furnish the component medical society a detailed report of its activities at least once annually.

Five basic principles should govern in relationships among patients, physicians, and the National Foundation chapter: The chairman of the medical advisory committee should automatically be a member of the chapter's executive committee; expenditure of National Foundation funds for patient care and professional education should

have the committee's approval; except for special medical consultants called when a difference of opinion exists, no professional fees should be paid from chapter funds; chapters extending aid to patients should conform to policies of the medical advisory committee; and physicians who agree to serve on advisory committees should be aware of the responsibilities attendant upon such positions and offer constructive leadership in this respect.

Let it be earnestly hoped that the action of the AMA delegates is the first step toward the creation of a new climate of mutuality and a common purpose in the extension of quality care and scientific advancement.—R. B. K.

Politics and Health: Circa '60

When Mr. Average American reads the party platforms of phony platitudes, political promises, and probity prostitution, he may get the idea that from here on in, he need only vote for a living. About the only thing the conventions didn't promise was to pay the bill and if the platforms were enacted, it's doubtful if anybody could. But the semi-finals are done and gone, the convention oratory is still, and the delegates have come home. Until November 8, Democrats and Republicans are totally committed to the cold, calculated, deliberate business of bringing about each other's political demise. Anything goes and if the conventions are valid bellwethers, anything will.

Although some have said that the two major party platforms differ only by semantics, physicians will find significant variations in political philosophy as regards the health planks. True enough, there are some goals common to both platforms but the big difference is in how the parties propose to achieve mostly identical and common objectives. For the Democrats, it's the federal route all the way. The Republicans seek only a little less but they steer clear of the Social Security mechanism and Forand-type programs so dear to the hearts of the Democrats. Now this doesn't mean that the Republicans disavow federal participation in health care programs. On the contrary, both parties are agreed to put federal funds into schools of medicine, dentistry, public health, and nursing.

The Democrats' *generally federal* program asserts that ". . . illness is expensive. Many Americans have neither incomes nor insurance protection to enable them to pay for modern health care. The problem is particularly acute with our older citizens, among whom illness strikes most often."

The Los Angeles manifesto continues: "The most practicable way to provide health protection for older people is to use the contributory machinery of the Social Security System for insurance covering hospital bills and other high cost medical services. For those relatively few of our older people who have never been eligible for Social Security coverage, we shall provide corresponding benefits by appropriations from general revenue."

The Republicans' *generally voluntary* program proclaims that ". . . new needs . . . are constantly arising in our highly complex, interdependent, and urbanized society. To meet the needs of the aging, we pledge . . . federal leadership to encourage policies that will make retirement at a fixed age voluntary and not compulsory; support of programs that will persuade and encourage the nation to utilize fully the skills, wisdom, and experience of older citizens; (and) prompt consideration of recommendations by the White House Conference on Aging called by the President for January 1961."

Commenting on Social Security, the Republicans would expand coverage and liberalize selected benefits ". . . on a basis which would maintain the fiscal integrity of the system." Their eldercare approach would ". . . provide the beneficiaries with the option of purchasing private health insurance, a vital distinction between our approach and Democratic proposals in that it would encourage commercial carriers and voluntary insurance organizations to continue their efforts to develop sound coverage plans for the senior population."

The Republicans were unique in pledging to ". . . protect the personal relationship of patient and physician."

Noble endeavors with third parties, independent electors, and party bolts notwithstanding, one of these two platforms will become the nation's political and socioeconomic climate in 1961. Doctors of medicine should read each platform carefully, hear all candidates, make a contribution—however modest—to the party of their choice, work for their candidate's campaign, and vote on November 8. Political action begins with the intelligent exercise of the franchise and if physicians abdicate this obligation of citizenship, they can reasonably expect the day to come when the patient's only responsibility will be to furnish the pathology.—R. B. K.

The President Speaking

'If the Doctor Will . . .'

G. SWINK HICKS, M.D.
Natchez, Mississippi

THE AMERICAN PHYSICIAN is in the political arena and, whether he likes it or not, he is a central figure in the 1960 presidential campaign. Of course, this isn't the first election contest in which health care has been an issue. In 1948, the Truman "Fair Deal" forces advocated a medical care program later to show up in the unsuccessful Wagner-Murray-Dingell bill but by no means was it a pivotal campaign issue. Today, federal health care ranks with foreign policy, defense, the agricultural surplus, and domestic interest rates in political importance.

Generally, candidates who seek out-and-out federalization of all medical services are either intellectually dishonest or plainly naive. Their objectives, however, are clear enough and they know what they are saying. First, they cry for federal medical programs to fulfill what they call "unmet needs." There is yet to be demonstrated any need for health care for any age group which is not now adequately met or which cannot be met by existing private means. It seems to follow that the real "need" is for votes—not health care. Then, there is the manner in which the program is presented and it's equally false and spurious. Liberal politicians say that the question is whether or not the federal government shall provide medical care for this or that segment of the population. No government can provide medical care—this can be done only by a physician. And if freedom prevails, no government can legislate compulsion upon a doctor of medicine, either.

Every doctor can do something now and if he values the traditional pattern of private, quality medical care, he should. Local programs of care for the indigent—the genuinely indigent, that is, not the "politically" indigent—should be accelerated. These programs begin in the physician's office and among members of the local hospital's professional staff. The doctor must assume his proper role in local political organization and use the wealth of valid information immediately at his disposal to give the lie to vote-bait campaigning. Many complain and despair of legislative trends affecting medicine but few take the initiative to tell the facts to the chamber of commerce, community leaders, the civic organization, the church group, and the service club.

It's inexcusable for any physician to be uninformed on medical issues in the political and legislative field. It's disheartening to hear complaint without statement of fact and apathy is worse. The profession whose gift is an additional quarter century of life in just two generations, who has virtually conquered the infectious diseases, and who performs surgical miracles as a matter of routine is equal to the day's political challenges. The question is not whether the doctor is able but only if the doctor will. ★★★

Book Reviews

Fundamentals of Clinical Hematology. By Byrd S. Leavell, M.D., professor of internal medicine, physician-in-charge, hematology section, University of Virginia School of Medicine, and Oscar A. Thorup, Jr., M.D., associate professor of internal medicine, University of Virginia School of Medicine. Cloth, 503 pages. Philadelphia: W. B. Saunders Company, 1960. $10.00.

This book is a worthwhile contribution to the field of clinical hematology. The authors begin each section with a concise explanation of the pertinent background information necessary for an intelligent discussion of therapy.

There are sections on the various types of anemia, polycythemia, leukemia, lymphoma, cancer chemotherapy, and coagulation defects. The authors have carefully avoided the risk of dogmatism usually encountered in "concise" surveys of a field. The information is up-to-date and includes use of radioisotopes in the field.

The chief deficit in the book is the lack of an orderly discussion of hemolytic mechanisms although various hemolytic anemias are discussed as entities. Each section is well amplified by illustrative case histories. This book can be recommended highly to medical students and for those wishing a short, up-to-date review of the field, but it cannot be regarded as a hematological reference book.

WARREN N. BELL, M.D.

Domestic Journals

Current Theoretical Concepts in Psychosomatic Medicine. Harold I. Kaplan and Helen S. Kaplan, Ph.D.: Am. J. Psychiat. 115:1091 (June) 1959.

In view of the confusing literature and seemingly contradictory opinions expressed in regard to the psychosomatic disorders, this is a timely article which reviews the several groups of theories in vogue. Although the theoreticians agree that psychic factors play a noteworthy etiological role in many common ailments, there is little agreement about the basic mechanisms by which psychological and physical factors interact to produce disease. No one theory is adequate to explain the assumed relationship between psychological difficulty and physical malady. Because the definition of "psychosomatic disease" is controversial, the authors restrict the term psychosomatic to diseases in which psychological events appear to contribute heavily to etiology and to diseases in which manipulation of psychological factors seems markedly to influence the course of the illness.

The lack of agreement in psychosomatic theory results partly from conceptual confusion arising out of the fact that entirely separate and distinct sciences (psychology and physiology) study similar phenomena at different levels, using different systems of semantics and symbols, as well as using different methods of inquiry. The relative underdeveloped state of psychology, psychiatry, and psychoanalysis compared to the other physical and biological sciences furthers the lack of agreement. Finally, the authors suggest that one "unified theory" may never be possible.

Psychosomatic theorists are divided into three groups. One group assumes the psychological make-up of the individual and the character of the psychological trauma determine the nature of organic illness. This group of specificity theories includes the historically important concepts of Flanders Dunbar ("personality profiles"), various derivatives of Freud's libido theory, and the more currently popular theories of Franz Alexander. Alexander's ideas, oversimply stated, are that specific typical unconscious conflict situations result in specific emotional reactions that have specific parasympathetic and/or sympathetic concomitants, which affect specific visceral organs and thereby eventually lead to organic pathological changes in susceptible individuals. Although there is some support in various studies for Alexander's theory, the authors term it "a basically unvalidated hypothesis resting on unvalidated underlying assumptions."

The second group discussed, the "nonspecific theoretical approaches," includes the work of Wolff, Mahl, Selye, and various animal experimentalists. This approach assumes there is no correlation between the type of psychological stress and the nature of the organ selected for the disease. Wolff has demonstrated changes in various organs and systems in relation to emotional stress as well as ordinary life situations. The changes in-

volve variations in the swelling, vascularity, and motility of various viscera which are assumed to be precursors of potentially permanent pathological changes which constitute psychosomatic disease. He has concluded that psychosomatic disease is a result of attempts of the total organism to protect itself against psychogenic stress in the form of threatening symbols or situations. He has been criticized on the basis of being too superficial and ignoring important unconscious psychological data.

Selye views some psychosomatic disorders as side products of the body's attempt to adapt to stress from any source and his studies point to the hypophyseal-adrenocortical axis as the focal point of the physiological adaptive changes. Including themselves in the nonspecific group, the authors present their idea that psychosomatic disease is a result of a failure or breakdown of psychological defenses. This leads to a chronic state of emotional tension, which produces psychosomatic disease in constitutionally susceptible individuals.

The third group of theorists consists of those who object to the lack of validation of the specificity theories and yet are dissatisfied with the overgeneralized nonspecific theories. Galdston and Grinker are two well-known representatives of this group. Both stress the need for interdisciplinary approach to the study of the problem.

The authors finally caution the reader to be aware of the existence of the psychosomatic relationship and of the fact that different opinions about etiology exist, but to treat the patient as an individual, recognizing that no formula or set treatment regimen can as yet be applied to any particular problem. They further advise that each proposed theory should be scrutinized under the harsh and impartial light of the scientific method.

L. C. Hanes, Jr., M.D.

The Parents of Retarded Children Speak for Themselves. Charlotte H. Waskowitz: J. Pediat. 54:319 (March) 1959.

A group of 50 parents of retarded children, who have been seen in the Harriet Lane Home Psychiatric Clinic, were sent letters requesting follow-up interviews. Of this group, 40 were seen. Of the 10 remaining, the majority could not be reached, and only three refused to participate. In general, the parents could be described as an intelligent group of young and middle-aged people with small families of two or three children. They were all of the white race and in a middle socioeconomic group. Diagnostically the children were as follows: 19 mongoloid; 15 brain-damaged; one epileptic; one seriously emotionally disturbed; and four of unexplained etiology. There was one family which included two retarded children.

The first question was what physician had been consulted initially regarding the child's problem. In 25 cases the pediatrician was first consulted; the family physician in seven instances; the obstetrician in three; a neurologist in one; and a Child Guidance Clinic in one. In three instances the parents consulted no one, stating that they already knew of the child's retardation.

In general, the findings in this survey indicated that these parents wished to be handled gently and warmly at all times, to be talked to in a language which they could understand, without evasiveness, following a thorough examination, history taking, and indicated laboratory tests. They particularly stressed that they wished their children "to be treated as individuals and that the counselor should be interested in the child's problems as well as the parents'."

The parents seemed to be expressing a need for more responsible and integrated services in the field of the care of the retarded child. They seemed to be able and willing to accept the uncertainty involved in the diagnosis where a clear-cut one could not be made, if they could depend upon a centralized resource and one individual integrating the findings. In the instances where the parents indicated that they wished for a frank,

"Now, I would recommend that you stop smoking exploding cigars."

direct diagnosis as early as possible, they felt they could accept this if the counselor was compassionate and respected their strength and dignity. They also expressed a need for time to work out their problems step by step. Many of them realized that these problems would arise at different age levels as the child grew. They also emphasized that feelings of anxiety and guilt could not be resolved simply by articulating them. They also stated that a hope for small gains and elementary victories, such as the possibility of toilet training the child and his being able to communicate his needs, were extremely helpful.

In summary, it is stated that professional persons counseling such parents may do well to listen to them carefully and take clues from their answers to both leading and general questions.

MARGARET BATSON, M.D.

Paraplegia: A Head, a Heart, and Two Big Wheels. Jules Saltman: Public Affairs Pamphlet No. 300 (July) 1960.

Once doomed to early death, the paraplegic with the aid of medical science may now have a normal life span. According to one estimate, there are now as many as 200,000 of them in the United States. All are paralyzed, but their paralysis may differ in degree and cause. They all, however, share essentially the same problems in adjusting to every day living.

Jules Saltman, a free-lance writer on medical and health subjects and a consultant in educational materials for leading health foundations, rounds up the present-day situation of paraplegics in this latest Public Affairs Pamphlet.

"In the last 20 years paraplegics and quadriplegics and their wheelchairs have become a common sight," he points out. "They work and play, get married and have families, like the rest of us."

The causes that may put a person in a wheelchair are many, according to Saltman. They divide into two general groups: disease and trauma. The disease group includes poliomyelitis, muscular dystrophy, and various others. Disease may attack the muscles or the nerves serving them. Paralysis may also be the result of a birth defect or, in adults, a stroke.

In discussing treatment, Saltman writes, "Injury to the spinal cord is generally permanent and, at this moment, incurable because the nerve tissue does not seem to regenerate spontaneously, as do other tissues." He discusses the most promising areas of research and points out that spinal columns in lower animals have been shown to regenerate. "At least it can be said that cord regeneration is not absolutely against nature," he concludes.

"Paraplegia: A Head, a Heart, and Two Big Wheels" is the 300th in the Public Affairs Pamphlet series, now in its 25th year. It may be obtained for $.25 from the Public Affairs Committee, 22 East 38th Street, New York City.

PERSONALS

TERRELL DAVIS BLANTON, Jackson, a student at the University of Mississippi School of Medicine, has been awarded a March of Dimes Fellowship of $600 for special research in genetics. The fellowships are awarded to a limited number of candidates who have completed one year of medical school and can devote at least two months to full-time research study.

EDGAR E. BOBO has announced the opening of his office for general practice in the Pearl community.

JULIAN BRAMLETT, son of Mrs. E. S. Bramlett and the late Dr. E. S. Bramlett of Oxford, has opened his offices at Oxford. He recently completed his residence in general surgery at John Gaston Hospital in Memphis.

MARION H. BROWN has joined Joseph P. Crawford, James H. Lipsey, and Jack A. Atkinson in their Brookhaven clinic.

W. H. BURROW, Greenville, is serving as the new president of the Washington County chapter of the American Red Cross.

JACK QUIN CAUSEY, who has served the past two years as a member of the staff at Field Memorial Community Hospital in Centreville, has entered residency in internal medicine at Charity Hospital, New Orleans.

ROBERT H. CHESS has announced the opening of his offices for the practice of general medicine in Meridian.

CHARLIE W. COOPER, Bude, has taken over the general practice of Mary E. Kleinpeter in Fayette.

WILLIAM N. CROWSON, Clarksdale, has announced the association of Whitman B. Johnson, Jr., in the practice of general and thoracic surgery.

JOHN R. DAVIS has joined the staff of the Natchez Medical Clinic.

CARL DAY has announced a $50,000 expansion to his Physicians and Surgeons Clinic in Yazoo

City. The building will be enlarged and the P&S Pharmacy, presently housed in the basement of the clinic, will have a ground level entrance.

C. L. Delany, Pelahatchie, has announced the opening of his office for the practice of general medicine and surgery.

John T. Frazier, Columbus, has been elected second vice president of the local Lions Club.

W. E. Godfrey has joined the staff of the Barnes and Loe Clinic in Natchez. Dr. Godfrey recently finished a residency in obstetrics and gynecology at Confederate Memorial Hospital in Shreveport.

Sidney Graves, Bruce M. Kuehnle, Louis C. Lehman, Jack H. Phillips, T. W. Talkington, E. E. Benoist, and Clifford Tillman have moved their offices to the new Natchez Medical Arts Building.

James C. Griffin has joined J. Harvey Johnston, Jr., George E. Twente and W. C. Shands in the practice of surgery in Jackson.

Cecil G. Jenkins has announced the opening of his pediatric practice in Jackson.

Varna Petyon Love, Memphis, has joined the Tippah County Hospital as x-ray technician. She completed her premedical education at Memphis State and received her medical degree from the University of Tennessee. She did her internship in radiology at the Methodist Hospital in Memphis.

Travis E. Lunceford, Maben, administrator of the Tom Bailey Memorial Hospital, has been elected president of the Maben Lions Club.

Dan McLeod, McLain, was honored on his 72nd birthday, August 14, at the Vernal Presbyterian Church. An informal program and an old-fashioned dinner-on-the-ground were held.

S. R. Pate, Jr., has taken over the general practice of Worth I. Dunn in Lexington. Dr. Davis has just completed his internship at the University of Mississippi Teaching Hospital. Dr. Dunn has entered a residency in ear, nose, and throat in Tampa, Fla.

M. L. Pharr, Jackson, has been named secretary-treasurer of The Fondren Civitan Club.

Gladys Ratcliff, McCall's Creek, has announced her return to practice.

H. A. Richardson, director, professional services at the Biloxi Division VA Center, has announced the appointment of D. J. Geraci as a full-time physician.

John B. Spriggs has joined the staff of the Biloxi Trudeau-Bolton Clinic in the general practice of surgery. Dr. Spriggs is a diplomat of the American Board of Surgery, a fellow of the American College of Surgeons, and a fellow of the International College of Surgeons.

Robert Townes has been named second vice president of the Grenada Lions Club.

William Thornton was recently elected president of the Meridian Exchange Club.

Edwin B. Van Ness, chief, radiology service at the Biloxi division of the VA Center, was recently awarded for his 30 years of federal service. A 25-year pin went to Dr. Ephraim S. Garret, chief, neuropsychiatry service, and 15-year pins were given to William G. Nichols, Jr., and Mark S. Young.

Frank Wade has joined the Medical and Surgical Clinic in Magee.

W. J. C. Wiemers, staff physician at the Mississippi State Sanatorium, was honored with a reception marking his birthday and his retirement from active connection with the hospital. Dr. Wiemers will continue to live in Sanatorium and will be staff physician emeritus.

C. D. Wilson, Jr., Houston, has announced his association with M. C. Sappington in the practice of medicine and surgery.

O. B. Wooley, Jr., has joined Claude G. Callender, James L. Royals, and C. G. Sutherland in the Woman's Clinic, Jackson.

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"Something must be wrong, doctor . . . I'm a highly successful businessman and no ulcers."

Medical Missionary Tells of Problem Diseases, Witchcraft, Communism on Return From Indonesia

The physician practicing medicine in Indonesia may not have to contend with "TV cures," but the Dukuns (witchdoctors) and the still prevalent superstitions of the people provide stiff competition. So says Dr. Winfield Applewhite, Baptist medical missionary who has recently returned to Jackson after four years in Indonesia.

Medical missionary and family pose for JOURNAL MSMA *camera on return from Indonesia. Left to right they are Mrs. Applewhite and Elizabeth, Dr. Applewhite, Charlotte, Virginia, and Rebecca.*

In an interview with JOURNAL MSMA, Dr. Applewhite said that the Dukuns still hold a favored position among the people and deliver the majority of babies. He told of an educated couple, both schoolteachers, who came to their clinic in Kediri, Java, until time for delivery. Then, even though the woman had been told a cesarean section was necessary, she went first to the local Dukun. After three days of labor and treatment—during which the witchdoctor literally jumped on her to deliver the baby—she was brought to the clinic. Although the woman was saved, the child died.

"However," he said, "the people are gradually coming to trust us and to have confidence in our work."

Dr. Applewhite brought home with him for the year's furlough his wife, the former Miss Laverne Viverette of Union, and their four daughters, Rebecca, 10, Charlotte, nine, Virginia, six, and Elizabeth, two, who was born in Indonesia. When questioned, the girls all said they enjoyed living in the Far East, but were excited to be back for a while.

Rebecca and Charlotte have kept up their school work with their mother's teaching. They started going to the Indonesian school in the afternoon "just for fun" after they finished their English work in the morning. For two years, they have both passed their grades although neither had studied Indonesian before. The whole Applewhite family speaks the Indonesian language well.

Dr. Applewhite, who performs the majority of the surgical work at the hospital, plans to do postgraduate study in chest surgery at the University of Mississippi School of Medicine during the coming year.

Questioned on Indonesian medical problems, he cited tuberculosis, malaria, nutritional diseases, and parasites as the primary hazards.

"You are bound to have a lot of disease," he said, "in a place where the ratio of persons to doctors is 90 million to 1,600."

The medical picture is even darker than statistics show since dentists, veterinarians, and physicians who have given up medicine to become government officials are included in the 1,600. Last year the 100 bed hospital at Kediri with a staff of four physicians admitted about 2,000 patients. The outpatient service registered 36,500 during the year.

"We don't see much early pathology," Dr. Applewhite said. "They usually come to us when nothing else will work."

He pointed out that the hospital, which is maintained by the Foreign Mission Board of the Southern Baptist Convention, is well-equipped and modern. It is the only hospital in a radius of

100 miles with any oxygen at all, Dr. Applewhite said.

Just before the Applewhites left for the states, a new surgical building with two major operating rooms and one small room for obstetrical procedures was opened. Plans are being made to open a nursing school next year.

In regard to Indonesia's attack on its medical problems, Dr. Applewhite felt the country was making great strides. He pointed out that leprosy, once prevalent, was no longer a great problem. The clinic sees about four or five cases a month, he said. He also said that the government was shortening and improving the medical education system.

Asked about the situation of Americans in Indonesia, Dr. Applewhite said, "We are always guests." He felt that nationalism is the strongest force in the country which has only had its indipendence about 18 years. "The Communists use the nationalistic spirit against all foreigners," he said.

At present, according to Dr. Applewhite, President Sukarno is proposing a government which he claims is more suitable for Indonesia—a "guided democracy" in which the executive has a great deal of power. Dr. Applewhite pointed out that the Indonesian government was quite interested in welfare and education and operated under what Sukarno calls "socialism a la Indonesia."

Five other Mississippians, Dr. and Mrs. Robert L. Lambright and their three children, remained in Kediri. They will return to Mississippi next year when the Applewhites are back in Indonesia.

Born in Atlanta, Dr. Applewhite attended elementary school in Jackson. He attended Baylor and Vanderbilt Universities. His father, Dr. C. C. Applewhite, is retired from the U. S. Public Health Service and living in Jackson.

Board of Health Issues 151 Medical Licenses

One hundred and fifty-one physicians were licensed to practice medicine in Mississippi during the June meeting of the State Board of Health, according to Dr. A. L. Gray, executive officer. Nineteen licenses were issued by reciprocity with other states and 132 by examination, he said.

In all 224 students took the exams. Ninety-two took tests over the first two years of medical school, 98 over the last two years, and 34 over all four years. Two candidates—both taking the first two years' tests—failed.

This year's license issue shows a slight rise over last year when 143 licenses were awarded, but a decrease over 1958 when 156 were given out and 1957 when 154 were issued.

During the year ending in June, Mississippi lost at least 60 physicians—the number of licenses the Board of Health certified to other states. However, no net gain or loss can be ascertained from health department statistics, Dr. Gray said, since there is no way of knowing how many of the newly licensed physicians will actually practice in the state.

Rester Joins Board of Health

Robert R. Rester has joined the Mississippi State Board of Health as radiological physicist in the Division of Occupational Health and Factory Inspection.

A native Mississippian, Rester was graduated from Mississippi College and completed his postgraduate study in radiation physics at the University of Kansas. He also worked with the Atomic Energy Commission. His particular field is radiation measurement. Rester will be available to state physicians for advice on the safe use of radiological equipment.

Council on Alcoholism Awarded Research Grant

The National Institute of Mental Health has awarded a research grant to the Jackson Council on Alcoholism. The grant will be used to investigate alcoholism programs in other cities in an effort to set up adequate facilities in the Jackson area.

The Council, a voluntary health organization supported locally by the United Givers Fund, is affiliated with the National Council on Alcoholism. Organized in 1950, it has operated an information center since 1956.

Dr. George L. Maddox, currently serving as Council chairman, will be principal investigator under the grant. He will be assisted by Travis McCharen, chairman of the Council's advisory committee; Mrs. Ruth T. Breen, executive director of the Information Center; Mrs. Vashti I. Cain, supervisor of narcotics; State Department of Education, and William H. Furr, rehabilitation counselor and research field coordinator.

127 Million Persons Now Have Health Insurance

More than 127 million Americans—72 per cent of the civilian population—had health insurance at the end of 1959, according to the Health Insurance Council. The Council based its figures on its 14th annual survey of the extent of voluntary health insurance coverage in the United States. The survey covers insurance companies, Blue Cross-Blue Shield, and other health care plans.

The Council said both the number of persons covered by health insurance and the amount of benefits paid reached new highs last year. Coverage increased by 4.8 million during 1959 to reach a total of 127,896,000 persons with health insurance protection.

Benefit payments by all health insuring organizations to help cover the cost of hospital, surgical and medical care amounted in 1959 to more than $4.3 billion, up $400 million over 1958, reported the Council. In addition, persons with loss-of-income policies received $838 million in benefits from insurance companies to replace income lost through disability.

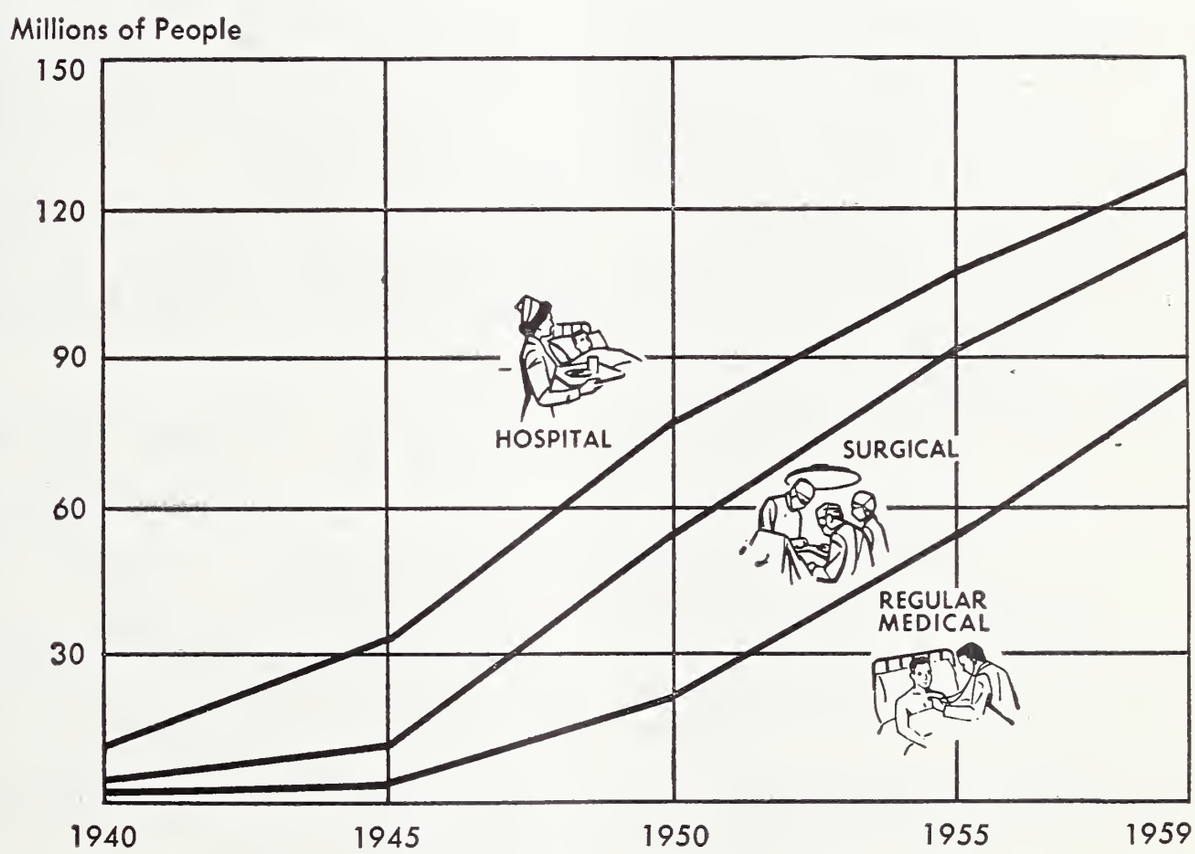
Thus, a grand total of $5,175,000,000 in health insurance benefits was distributed during 1959, up 10.9 per cent over 1958.

The HIC, a federation of insurance associations, said that based on the early trends for 1960, it estimated that as of June 1, some 130 million persons (73 per cent of the civilian population) had hospital expense insurance, 118 million had surgical expense insurance, 84 million had regular medical expense insurance, 24 million had major medical expense insurance, and 44 million were insured against loss of income.

The Council said these figures also revealed the breadth of health insurance protection which Americans have. The organization said as of June 1, more than 90 per cent of persons with health insurance have both hospital and surgical expense insurance, and 65 per cent have hospital, surgical and regular medical expense insurance, which helps pay for doctor visits for nonsurgical

GROWTH OF HEALTH INSURANCE COVERAGES

Number of Persons Insured Against Hospital, Surgical, and Regular Medical Expenses



care. Five years ago, the figures were respectively, 85 and 47 per cent.

A breakdown of the number of persons with health insurance at the end of 1959, by type of coverage and type of insuring organization, is as follows:

Hospital expense insurance was provided by insurance companies to 75,457,000 persons; by Blue Cross-Blue Shield and similar groups to 56,825,000, and by other health care plans to 4,861,000. After deducting persons protected by more than one type of insuring organization, the Council reported that 127,896,000 persons had hospital insurance, a 3.9 per cent increase over the 123,038,000 persons so covered at the end of 1958.

Surgical expense insurance by insurance companies covered 72,263,000 persons; by Blue Cross-Blue Shield and similar groups 48,843,000, and by others 5,813,000. Allowing for duplication, 116,944,000 persons had surgical insurance, a 4.9 per cent boost over the 111,435,000 persons of the year before.

Regular medical expense insurance accounted for 42,999,000 persons through Blue Cross-Blue Shield and similar groups; 38,227,000 through insurance company programs, and 6,347,000 through other plans for a total, eliminating duplications, of 82,615,000 persons, a 9.6 per cent climb over the 75,395,000 persons in 1958.

Major medical expense insurance coverage through insurance company programs increased 25.8 per cent, from 17,375,000 to 21,850,000 persons. Major medical insurance is designed to help absorb the cost of serious illnesses, and pays benefits ranging up to $10,000 or $15,000.

Loss of income found 32,869,000 persons covered by insurance company policies. The number of persons who work where there are formal sick leave payment arrangements brought the total figure to 43,169,000 persons, an increase of 3.1 per cent over the 41,870,000 of the year before.

Butts to Head Southern Medical Staff

Robert F. Butts has been named executive secretary-treasurer of the Southern Medical Association. He succeeds V. O. Foster who recently retired due to illness.

For the past six years, Butts has served as business manager of the association. He joined Southern Medical in 1948 as assistant secretary-manager.

A new member of the staff, Roy B. Evans, Jr., will oversee many business details as administrative assistant. C. P. Loranz, former secretary-manager who is now in his 48th year with the association, is serving as adviser and special consultant.

Mississippi Physician Is New GOP Committeeman

Mississippi's new Republican national committeeman is a Hattiesburg pediatrician, Dr. Van C. Temple. Named to the high post by the Mississippi GOP, Dr. Temple was officially recognized by the national organization and seated during the Republican convention at Chicago.

Temple

A native of the city where he has practiced medicine for 28 years, Dr. Temple attended the University of Mississippi and later, Vanderbilt Uuiversity School of Medicine. He has been active in civic affairs and in the work of medical organization, having served as president of the South Mississippi Medical Society and the Mississippi Pediatric Society. He is currently president of the Hattiesburg Civic Association.

Dr. Temple is married to the former Margaret Turner. There are three children, Mrs. Duncan Goldthwaite, Pensacola, Florida; Van C., Jr., a first classman at the U. S. Naval Academy; and Catherine, a senior at Mississippi Southern College.

Pediatric Seminar Set for Sept. 23

A seminar on "Advances in Pediatric Therapy" will be held Sept. 23 in New Orleans.

Sponsored by the Louisiana chapter, American Academy of Pediatrics and the American Academy of General Practice, the seminar will open at 9:00 a.m. at the Roosevelt Hotel.

Participants in the meeting will earn five hours credit as Category I for the American Academy of General Practice.

McCharen Comments On Doctors and Disability

The social security disability program by any standard is big business. Around 800,000 persons are eligible for the program and more than half a million of these are receiving cash benefits. As of June 1959, over 5,000 disabled persons and their dependents in Mississippi were recipients with payments annually totaling $3,120,000.

This is of importance to Mississippi physicians, according to Travis McCharen, director of the Vocational Rehabilitation Division of the State Department of Education, because "every physician in the state has been asked at one time or another to furnish medical evidence in support of patients' claims."

Said McCharen, "Medical reports by private physicians have been an essential factor in making decisions in disability cases."

Who is eligible for disability payments? In order to qualify under the program, a worker must: (1) be between 50-65, (2) have social security earnings credited for at least five of the 10 years before the disability, (3) prove that he is "unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or to be of long-continued and indefinite duration."

Special cases include (1) children of retired, disabled or deceased workers who may receive benefits in their own rights if they were disabled before age 18, and (2) disabled workers under 50 who may have their social security records "frozen" to protect their rights to future benefits

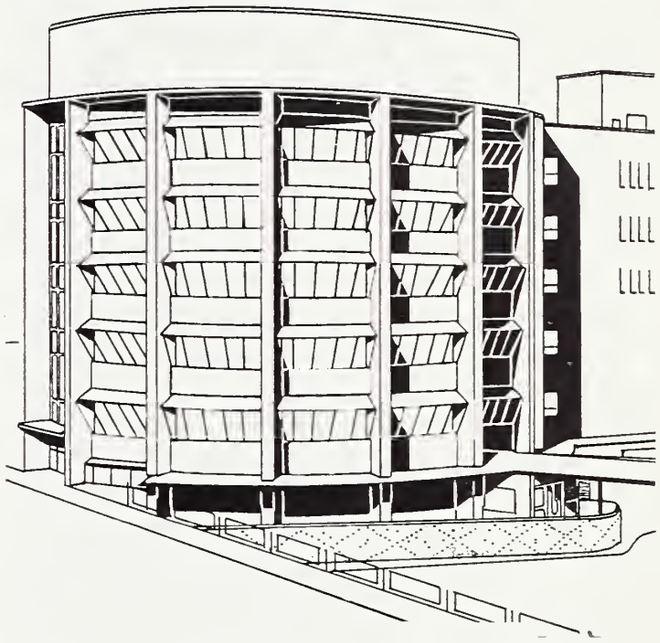
McCharen emphasized that medical data necessary to prove disability is often more detailed than that needed for diagnosis and treatment. In the case of a heart patient, for example, the physician must give more information than such general terms as mild, moderate, or severe, he said. This data, explained McCharen, should include cardiac size as shown by x-rays or clinical examination, EKG findings, cardiac edema, the amount of dyspnea or angina, extent of renal involvement, and response to therapy. The decision of eligibility in Mississippi rests with the Vocational Rehabilitation review team. At least one physician serves on the team at all times.

A pamphlet on this subject, "Disability and Social Security," prepared for physicians, may be secured from any social security district office.

Vanderbilt to Build Circular Hospital

The world's largest circular hospital will soon be built at the Vanderbilt University Medical School. To house 164 beds, the structure will contain seven floors and is reported to cost $3,100,000.

The circular West Wing, to be connected to the main body of the hospital, is termed "the



University's latest answer to more adequate facilities" by the school's monthly publication, *Inside the Medical Center*. As one spokesman put it, "This is a significant step by the University toward combining modern medicine and modern architecture."

Circular designs for hospitals are not an entirely new concept. Small one- and two-floor experimental units have been built over the country. One of the first was the two-floor circular Valley Presbyterian Hospital in Van Nuys, Calif. Completed in 1958, the construction was reported to save nurses one step in every three by eliminating dead end corridors.

The Vanderbilt structure will contain 32 beds on each floor. Nursing personnel, located on a central platform, can view all patients through windowed rooms. Modern conveniences include bedside oxygen, suction and compressed air equipment. Television, with bedside speakers, and a two-way intercommunication system are also planned.

Hospital authorities expect West Wing to offer excellent research possibilities as well as lend itself to ease and economy of operation.

Health Board Recommends Vaccination Program

In the next few years Mississippi schoolchildren will probably be required to have smallpox, polio, diphtheria, tetanus, and whooping cough immunizations. This is the opinion of Dr. A. L. Gray, Board of Health executive officer.

In compliance with the new school health law passed by the 1960 session of the state legislature, the Board of Health has prepared a program for school boards undertaking compulsory immunization action. The law, in essence, authorizes school boards to require upon the recommendation of the State Board of Health and the county health officer the vaccination of school children against smallpox, typhoid fever, poliomyelitis, and other contagious or infectious diseases. However, no child shall be forced to be vaccinated against his religious beliefs or his health.

Since a number of school boards wished to set up an immunization program for the 1960-61 session, the Board of Health conferred with Assistant Attorney General Delos Burks and prepared a suggested order. The order will go into effect only when adopted by the local school boards.

Generally, the requirements are: (1) smallpox vaccination at not more than 5-year intervals, (2) three injections of polio vaccine, (3) three injections of diphtheria-whooping cough-tetanus vaccine, for first graders, and two injections for older schoolchildren.

Although typhoid vaccination was not included, the Board of Health recognized that it would be a desirable requirement in some areas of the state.

In an interview with JOURNAL MSMA, Dr. Gray explained that the Board of Health realized these schedules are not what some physicians advise for their patients. "Requirements of this type must provide minimum protection for the masses rather than desirable maximum protection for the individual," he said.

Dr. Gray predicted that the proposed schedules would eliminate epidemics and outbreaks serious enough to close the schools.

Commenting specifically on the polio requirements, he said that three instead of four injections had been specified because "we know three is still good immunity in most children." Although four injections would be better, he said, "the health department would have to scrape up something like $250,000 in one year to finish the immunizations we have already given." This would involve around 800,000 injections, he estimated.

In pushing the immunization program through the schools, Dr. Gray said that students would be encouraged to go to their family physician for the required vaccinations. It would be impossible for the health department to carry the load, he said.

Dr. Gray does not expect all school boards to adopt the suggested order in time for the 1960-61 school session. A number have already put it into effect, but many will probably wait until next year, he said.

Gentry Releases Narcotic Memo

Ernest M. Gentry, Dallas, Texas, district supervisor, U. S. Bureau of Narcotics, has prepared a memorandum on narcotic registration.

"Questions concerning the registration of hospitals, clinics, first aid dispensaries, and similar institutions frequently arise among physicians," said Gentry. "This memorandum is designed to answer those questions," he said.

Pertinent points in the memo:

1. In order to be registered under the Federal narcotic law, an institution must be entitled under state laws to handle narcotic drugs.

2. Physicians administering narcotics must be registered with the district director of internal revenue.

3. An institution maintaining a central narcotic supply must be registered in Class 4. Under such registration, narcotics may be administered only to patients in the institution. All narcotics must be accounted for on the narcotic records of the institution.

4. Narcotic drugs, including conditionally exempt narcotic preparations, given to a patient to be taken away from the institution must be obtained by the attending physician under his individual registration and accounted for on his individual records.

5. Class 4 institutions which dispense narcotics to out-patients must possess a valid pharmacy permit issued by the Board of Pharmacy and be registered in Class 3 as a retail dealer. Under these circumstances, narcotic prescriptions issued by physicians for out-patients must be filled from the Class 3 stock of narcotic drugs and separate records maintained.

6. All narcotic prescriptions must be dated and signed on the date issued and must bear the

patient's name and address and the physician's narcotic registry number.

7. Institution records should show kinds and quantities of narcotics used daily, patient's name and address, and purpose.

8. Physicians must secure narcotics for office use and medical bag supply from registered narcotic wholesale dealers under their registry number. Official narcotic forms from the director of internal revenue must be used. The only exception is that a Class 3 retail dealer may furnish a single ounce of an aqueous or oleaginous solution of not over 20 per cent narcotic content on a physician's official narcotic order form. Physicians may not use prescriptions to secure narcotics for office use.

9. Procedure in case of loss: (a) When narcotics are lost through breakage of the container or other accident other than in transit, the person having title must make a signed statement as to kinds, quantities, and circumstances. This statement should be sent to the narcotic district supervisor and a copy filed with other narcotic records. (b) When narcotics are stolen or lost or destroyed in transit, the consignee shall file a signed statement of the facts and documentary evidence that the local authorities were notified with the narcotic district supervisor. A copy should be filed with other narcotic records. (c) A loss in transit does not authorize a vendor to duplicate a shipment on the same order form. A separate order form for every shipment of narcotics is required.

10. Registration under the Federal narcotic law confers no right to conduct business contrary to state law.

11. Original as well as renewal applications for registration must be signed by the owner of an institution or an officer of a firm or corporation. Official narcotic order forms must be signed by the person who executed the application for registration. However, this person may delegate the right to sign by power of attorney filed with and approved by the director of internal revenue. The right to sign original and renewal applications for registration may not be delegated.

Copies of this memorandum may be secured from the Bureau of Narcotics, 1114 Commerce Street, Dallas 2, Texas.

Medicare Change Affects Payment Dates

A minor change in Medicare regulations may affect the payment date for physicians caring for uniformed service members' dependents, according to an announcement from the Office for Dependents' Medical Care. Program administrators are now required to withhold payment until after the "to" date in item 18 of the claim form, DA Form 1863. This is the portion of the blank where the attending physician or consultant shows the inclusive dates during which the patient was under his medical supervision.

"For the purpose of clarification," the Department of Defense announcement said, "the 'from' and 'to' dates are intended and interpreted to reflect the entire period during which time the civilian source furnished authorized care reflected by the claim to eligible dependents in accordance with the Medicare program.

"In this connection and insofar as physicians are concerned, the fees paid to participating physicians under the terms of the Medicare program for authorized services furnished in the case of surgical procedures include preoperative and postoperative care."

Participating doctors are asked to submit claims for payment as soon as possible after completion of care. Partial period billings are not encouraged, the announcement stated, because of additional administrative costs incurred and problems created in compiling valid statistical data on patients.

Reason for the regulation change, ODMC said, is that congressional appropriations for the program are to be charged for periods when care was actually rendered rather than when a physician submits his claim. For this reason, claims of more than one year old must be screened at Washington level before being processed for payment.

The change will affect Mississippi physicians rendering obstetrical services since claims may not now be paid until postpartum care has been completed. The state medical association will continue to pay claims in good order in 24 to 72 hours after receipt, MSMA spokesmen said.

Brandon Hospital Plans Poison Control Center

Beginning October 1, the Brandon Hospital will have a poison control center, according to Dr. S. K. Johnson, Pelahatchie. The center, under the direction of Dr. Johnson, will be available to doctors in the Brandon area for information and treatment.

Staffed by Drs. Richard Schuster, Curtis Roberts, and Charles F. Mitchell, all of Brandon, the center will be open 24 hours a day. The Mississippi State Board of Health is assisting the hospital staff in setting up the new service.

SIRS: Your editorial on progressive patient care hospitals in the August JOURNAL is an excellent presentation. In my brief career of 10 years in hospitals, the placing of various types of patients in various sections of the hospital has gradually evolved into a necessity because of nurse, doctor, and patient.

This is the type hospital I think should be built in South Jackson. I honestly believe that it would be a serious mistake to build a conventional type hospital instead of a PPC hospital.

J. L. WOFFORD, M.D.
JACKSON, MISSISSIPPI

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

GATLING, ROBERT RIDDICK, Jackson. Born Roduco, N. C., Sept. 8, 1917; M.D. Tulane University, New Orleans, La., 1941; interned Norfolk General Hospital, Norfolk, Va.; residencies, Vanderbilt University, Nashville, Tenn., and Bowman Gray School of Medicine, Winston-Salem, N. C., three years; certified by the American Board of Pathology, 1957; Diplomat of American Board of Pathology; member College of American Pathologists, American Association of Pathologists and Bacteriologists, and the International Academy of Pathology; Lieutenant Commander, U. S. Navy, 1942; elected July 5, 1960, by Central Medical Society.

HODGES, LUCIEN REDDING, Jackson. Born Wesson, Nov. 20, 1926; M.D., Southwestern University, Dallas, Texas, 1954; interned University of Minnesota Hospital, Minneapolis; residency in neurosurgery, University of Minnesota University Hospitals, Minneapolis, four years; U. S. Naval Reserve, two years; elected July 5, 1960, by Central Medical Society.

NIX, ROBERT LOWERY, Picayune. Born, Monticello, July 22, 1933; M.D., University of Mississippi, Jackson, 1958; interned University Medical Center, Jackson; elected March 14, 1960, by Pearl River County Medical Society.

BROOKSHIRE, JAMES LELAND, Hushpuckena; M.D., University of Nashville, Nashville, Tenn., 1907; interned St. Thomas Hospital, Nashville; postgraduate training at Mayo Clinic; practiced medicine in Hushpuckena for 47 years; past president, Clarksdale and Six Counties Medical Society; emeritus member of MSMA; died at the General Hospital in Greenville, Mississippi, July 24, 1960, aged 77.

BROWN, J. HOWARD, Eupora; M.D., University of Tennessee, Memphis, 1907; interned Vicksburg Charity Hospital, Vicksburg; practiced in the Eupora area 54 years; died at the Eupora Clinic, July 3, 1960, aged 74.

HOLLOWAY, PAUL DICKSON, Collins; M.D., Tulane University, New Orleans, La., 1919; interned Touro Infirmary, New Orleans, La. Pathology residency, Touro Infirmary, one year; died July 16, 1960, aged 67.

OLIVER, HOWARD BOOTH, Lodi; M.D. Memphis Hospital Medical College, 1911; interned Natchez Charity Hospital; U. S. Army, World War I; practiced medicine in Sledge and Duck Hill; doctor and surgeon for the Illinois Central Railroad; died July 21, 1960, age 77.

PARKER, PAUL HARMON, Meridian; M.D., Tulane University, New Orleans, La., 1937; interned Baroness Erlanger Hospital, Chattanooga, Tenn.; residency at Massachusetts Memorial Hospital, Boston, one year; Major, U. S. Army, World War I, five years; died July 21, 1960, aged 47.

SMITH, BEVERLEY EUGENE, Jackson; M.D., Tulane University, New Orleans, La., 1932; interned Bryce Hospital, Tuscaloosa, Ala.; residency Phipps Clinic, Johns Hopkins Hospital, Baltimore, Md., two years; certified by American Board of Psychiatry and Neurology, 1946; member American Psychiatric Association; Mississippi State Psychiatric Association; Southern Psychiatric Association; Lieutenant Colonel, U. S. Army, 15½ years; died at Mississippi Baptist Hospital, Jackson, July 7, 1960, aged 52.

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1. Rein, C. R., and Fleischmajer, R.: The efficacy of tetracycline phosphate complex (TETREX) in dermatological therapy. Antibiotic Med. & Clin. Ther. 4:422 (July) 1957.

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College of Surgeons Plans Clinical Congress

Improvement in the total care of surgical patients will be the goal of 10,000 doctors expected to attend the 46th annual Clinical Congress of the American College of Surgeons in San Francisco, Calif., Oct. 10 through 14.

Doctors from all parts of the nation and many foreign countries will attend sessions at this largest meeting of surgeons. More than 1,000 participants will take part in the various programs as authors of research reports, teachers of postgraduate courses, participants in panel discussions, lecturers, and operating surgeons in motion pictures and closed-circuit telecasts.

Dr. Leon Goldman, professor and chairman, department of surgery, University of California School of Medicine, Berkeley-San Francisco, is chairman of the local committee on arrangements.

Major speakers will include Dr. I. S. Ravdin, Philadelphia, chairman, Board of Regents, and incoming president of the College; Dr. Joseph Trueta, Oxford, England, who will speak on trauma and the living cell; Dr. Wendell M. Stanley, director of the virus laboratory at University of California, Berkeley, and Nobel winner in chemistry, who will deliver the Martin Memorial Lecture, named for the College founder, Franklin H. Martin, on the subject of virus-cancer relationships; Mr. Leslie Philip Le Quesne, London, England, who will give the annual Baxter Lecture, speaking on body fluid disturbances resulting from stomach obstruction.

Nine postgraduate courses will be offered, headed by surgeon-teachers distinguished in their respective fields. The Surgical Forum sessions will present 258 reports, demonstrating clinical and laboratory research in progress in leading medical centers. Operations will be telecast from Stanford University Medical Center, and doctors in the television audience may ask questions of the operating surgeons, and listen to discussions of the operations, conducted by panels of consultants. New motion pictures made especially for this meeting will be shown all week. Panel sessions in general surgery, and in the surgical specialties of gynecology and obstetrics, neurologic surgery, orthopedic surgery, plastic surgery, thoracic surgery, and urology will be held throughout the five-day meeting. Headquarters for the meeting will be the Civic Auditorium, with some sessions scheduled at nearby hotels.

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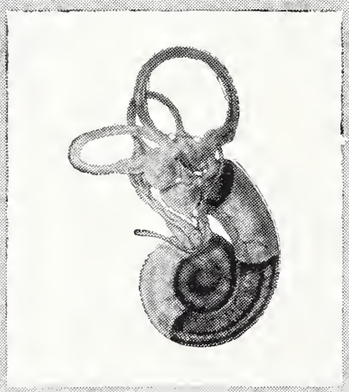

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Dr. Owen H. Wangensteen, Minneapolis, is retiring president of the College. Dr. Paul R. Hawley, Chicago, is the Director.

Rural Health Conference Set for Atlanta

Physicians and farm group representatives from 11 Southeastern states will gather in Atlanta, Ga., October 7-8, for the first regional conference on rural health.

"Joining Hands for Community Health" is the theme of the meeting which will be held at the Dinkler Plaza Hotel and is sponsored by the American Medical Association's Council on Rural Health.

Highlight of the conference will be a banquet address Friday evening, Oct. 7, by Dr. Julian P. Price, Florence, S. C., newly appointed chairman of AMA's Board of Trustees.

Among the subjects to be discussed at the conference are: Safety—in the Home, at Work, and at Play; Community Planning for Health; Approaches to Preventable Diseases; What's Involved in the Cost of Medical Care.

Conference co-chairmen are Drs. Francis T. Holland, Tallahassee, Fla., and W. Wyan Washburn, Boiling Springs, Md.

Participants will come from an 11-state area which includes Alabama, Florida, Georgia, Louisiana, Maryland, Mississippi, North and South Carolina, Tennessee, Virginia, and West Virginia.

Medical Writers Change Dates of Meeting

Because of a conflict with observance of Yom Kippur on October 1, the American Medical Writers' Association has changed the dates of its 17th annual meeting to November 18 and 19, according to Austin Smith, M.D., Washington, D. C., president.

The meeting will be held at the Morrison Hotel in Chicago. Departing from the traditional scientific program of individual presentations, the Association has scheduled two unrehearsed panels devoted to basic problems in the field of medical communication.

One panel, "Information: What It Is and How It's Used," will bring together writers from both lay and medical mass news media. Another, composed of medical editors, authors, and publishers, will discuss "Modern Aids to Medical Communication."

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1. Rubin, W., and Anderson, J. R.: Angiology 9:256, 1958.

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NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

October 1960

Dear Doctor:

Make no mistake about it: The chiropractors mean business on securing licensure in Louisiana, Massachusetts, Mississippi, and New York. The recent International Chiropractors Association convention pledged an all out fight in the four states, charging that "...organized medical opposition continues to be a decisive factor in the approval of such legislation."

> Clincher in the spine spankers' resolution was exhortation that AMA encourage speedy enactment of licensure laws. Action is unusual and significant, possibly the strongest such utterance since 1954 hassle in Mississippi legislature.

Construction progress on the 500 bed, $14 million Veterans Administration Hospital at Jackson has been dogged by strikes and weather. Wildcat stoppages, labor contract troubles, and picketing were recently compounded by heavy rains making the 28 acre building site a quagmire. Located adjacent to University medical school and hospital, the big federal facility is about one-half complete.

Yazoo City's Dr. Robert J. Moorhead became President of the Association of American Physicians and Surgeons at the St. Louis meeting this week. A recognized medical leader, he is past President of Mississippi Academy of General Practice and presently serves MSMA both as a committee and scientific section chairman.

Mississippi physicians are preparing for the 1960 Diabetes Detection Week set for November 13-19. Local societies, hospital staffs, and individuals may secure promotional kits, posters, and literature free from American Diabetes Association, 1 E. 45th St., New York 17, provided requests are made in next two weeks.

Next significant southern states medical meeting is Gulf Coast Clinical Society, Biloxi, October 12-13. Program is outstanding with name essayists and President C. D. Taylor, Jr., Pass Christian, urges all MSMA members to attend. Buena Vista is headquarters and eight hours Category I credit is allowed AAGP members.

Sincerely,

Rowland B. Kennedy
Executive Secretary

New Mississippi Program Featured In 1960 AMEF Campaign

Jackson - A joint appeal to physician-contributors by MSMA and the University of Mississippi chalks up a first in 10 years of American Medical Education Foundation campaigning, according to Dr. W. E. Caldwell, Baldwyn, association AMEF chairman. As before, donors may earmark gifts for any medical school or simply give to all 85 accredited institutions. All funds go to medical education since overhead expense is borne by AMA and participating state associations. Kickoff is November 1 and gifts are tax deductible.

Exclusive 'Medical Club' Organized In Coahoma County

Clarksdale - Most popular status symbol among Coahoma county small fry is "Tonsils Out Club," membership limited to tonsilectomy patients under 12 years old. Upon hospital discharge, youngsters receive special gold and black certificate signed by attending physician and administrator "...in witness of bravery" and lapel button.

Optometrists Score New Practice Gains In State Legislatures

Chicago - Optometrists were active in at least four state legislatures, scoring substantial practice gains in Kentucky and Rhode Island. The Blue Grass state enacted a measure requiring acceptance of and payment for optometric services by state agencies and political subdivisions without discrimination between optometrists and "other persons" licensed to render services. Rhode Island passed law to set up nonprofit optometric service corporation similar to Blue Shield. New York defeated bill to pay optometrists under health insurance and Michigan turned thumbs down on measure to allow them to fit contact lenses.

OVR Grant Made To Mississippi For Job Placement Of Blind

Jackson - A $34,500 grant from the Office of Vocational Rehabilitation has been made to the state welfare department's Division for the Blind to help finance research on placing blind persons in industrial jobs. The state will furnish an additional $7,600 for the project, according to division director Raymond D. Williams. Research project will consider special training needed for this final phase of rehabilitation of the blind.

Polio Vaccine Booth Hailed Success At New York State Fair

Syracuse - Members of the Onondaga County Medical Society and local public health nurses staffed a "get-your-Salk-shot" booth at the recent September 2-10 New York State Fair. The project was conducted for the third consecutive year as a joint effort of the medical society and state health department. Dr. Herman E. Hilleboe, N.Y. health commissioner, said that an average of 9,000 immunizations had been accomplished during each of the two previous fairs.

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION
October 1960, Vol. I, No. 10

ORIGINAL PAPERS

Evaluation of the Child With Arterial Hypertension

C. W. DAESCHNER, JR., M.D.
Galveston, Texas

An elevated arterial blood pressure in a child should be considered an indication for a thorough etiologic investigation. While a renal basis will be the answer in most patients, there are important nonrenal causes of hypertension in children. Successful management of these conditions depends upon early recognition and treatment. Etiology, prognosis, and treatment are discussed.

THE FINDING OF AN ELEVATED arterial blood pressure in an infant or child should always be considered abnormal and an indication for the initiation of a careful search for etiologic factors. In contrast to the adult, whose arterial hypertension is frequently idiopathic or "essential," it is encouraging to note that hypertension in childhood is more often a product of renal or systemic disease that can be recognized or corrected and the patient's hypertension can be cured or ameliorated.

A discussion of arterial hypertension in childhood should properly be prefaced with a brief consideration of the methods and techniques for blood pressure determination. Although blood pressure in children varies with age, normal standards have been developed so that the presence or absence of hypertension in an individual patient can be established clearly. While it is recognized that lack of patient cooperation may provide a challenging situation to the physician, a more significant variable in most patients is the proper selection and application of the blood pressure cuff. Too narrow a cuff will lead to falsely elevated blood pressure readings while too wide a cuff will give a misleading low blood pressure. Several approaches to the problem of cuff selection have been suggested. The most widely recommended procedure is that the cuff, when applied, should cover approximately two-thirds of the upper arm segment.[1] The American Heart Association[2] recommends a cuff 20 per cent wider than the diameter of the arm or leg at the site of application. Another useful approach is making the width of the cuff equal to one-half the circumference of the part to which it is applied.[3] The physician must either have available several cuffs of different widths or, more conveniently, the standard 12 cm. cuff folded lengthwise to a suitable width. In either case the cuff must be applied carefully and wrapped evenly so that when inflated there will be no bulging. Normal blood pressures in childhood range from 70 to 110 systolic and from 55 to 85 diastolic depending

From the Department of Pediatrics, Baylor University College of Medicine, Houston, Texas.
Present address: Department of Pediatrics, University of Texas Medical Branch.
Read before the Section on Pediatrics, 92nd Annual Session, Mississippi State Medical Association, Jackson, May 10-12, 1960.

upon the technique used. Pressures greater than 130/85 are probably never normal and, if persistent, should be an indication for careful etiologic investigation.

In newborn and premature infants the determination of blood pressure is frequently more complicated, and such special procedures as the flush technique[4, 5] must be utilized to secure even an approximation of arterial pressure.

TABLE 1

AN OUTLINE OF THE ETIOLOGIC FACTORS IN CHILDREN WITH ARTERIAL HYPERTENSION

A. Renal Disease
  1. Congenital
    - Obstructive uropathies
    - Polycystic disease
    - Aberrant or obstructed renal arteries
  2. Acquired Infections
    - Chronic pyelonephritis
    - Unilateral pyelonephritis with renal atrophy
  3. Hypersensitivity States
    - Acute glomerulonephritis
    - Chronic glomerulonephritis
    - Idiopathic nephrotic syndrome
    - Periarteritis and lupus erythematosis
  4. Miscellaneous
    - Wilm's tumor
    - Radiation inquiry "nephritis"
    - Hurler's disease

B. Cardiovascular Disease
  1. Congenital
    - Aortic valvular stenosis
    - Coarctation of the aorta
    - Patent ductus arteriosis
  2. Acquired or Iatrogenic
    - Rheumatic heart disease with aortic insufficiency
    - Anxiety and/or fear
    - Vasopressor agent therapy
    - Adrenal steroid or corticotropin therapy

C. Endocrine Disorders
  1. Hyperthyroidism
  2. Pheochromocytoma
  3. Cushing's Disease
  4. Primary Aldosteronism
  5. Congenital Adrenal Hyperplasia

D. Metabolic Disturbances
  1. Hypercalcemic States
    - Idiopathic hypercalcemia of infancy
    - Vitamin D intoxication
    - Immobilization
  2. Anoxia

E. Central Nervous System Disease

F. Idiopathic or Essential Hypertension

As a guide to the study of the patient with hypertension, an outline of etiologic factors is shown in Table 1. The major subdivisions are in the general order of decreasing incidence, renal diseases being by far the most common source of hypertension in infants and children.

RENAL DISEASE AND HYPERTENSION

The relation of the kidney to hypertension may be an extremely broad and far-reaching one. Increasing evidence suggests that the kidney may play some role in almost all forms of hypertension. However, in this section only those conditions in which primary renal disease is fairly consistently associated with arterial hypertension will be considered.

Congenital Conditions

Obstruction to the outflow of urine from the kidney due either to mechanical or neurogenic factors may lead to unilateral or bilateral hydronephrosis with renal parenchymal destruction. Such changes are frequently recognized by intravenous pyelography but may require cystoscopy and retrograde contrast studies for clear definition.

Case Report 1

A. L. E. was first seen at the age of 30 months because of "failure to thrive" for one year, marked irritability for six months, and a "peculiar bulge" recently noted in the right inguinal area. Blood pressure was 180/120 and pyelography revealed a small virtually nonfunctioning kidney on the right with a large dilated right renal pelvis and ureter. The kidney and renal collecting system on the left were normal. The right kidney and renal collecting system were removed. A small neurofibroma was found obstructing the right ureter just above the ureterovesical junction. The patient's blood pressure promptly returned to normal. In subsequent years she has had several additional surgical procedures for removal of neurofibromata elsewhere in the body. However, her growth and development have been normal and the hypertension has not recurred.

Cystic Disease

Congenital cystic disease of the kidney may consist of either single large cysts or multiple small cystic structures. In either case they represent a developmental anomaly within the renal capsule. As the cysts enlarge, there is increasing intracapsular pressure with destruction of renal parenchyma and tissue ischemia. No therapeutic procedure has been shown to be helpful when cystic disease is bilateral. In unilateral disease,

however, nephrectomy may lead to a normal blood pressure and therefore offers protection to the uninvolved kidney.

Case Report 2

R. L., a 6-year-old colored female, was first seen because of headaches and gross hematuria. She was found to have marked hypertension, but examination revealed little else. Although the hematuria gradually cleared over a two week period, the blood pressure of 180/120 showed no tendency to return to normal. Intravenous pyelography revealed the typical pattern of polycystic disease. Reserpine (0.25 mg.) and mecamylamine (5 mg.) given three times a day led to a gradual reduction in her blood pressure to 140/90. Five years later at a time when her blood pressure was 120/90, renal hemodynamic studies revealed a GFR of 33 cc/M^2/min (normal 55-75) and an effective renal plasma flow of 138 cc/M^2/min (normal 300-400). She is in school, alert, active, and free of headaches; she still shows a normal weight gain and height growth.

Aberrant Renal Arteries

Aberrant or constricted renal arteries may also lead to hypertension. Blood supply to the kidney appears to have a critical level of flow, below which tissue ischemia and the production of renin occurs. According to current thinking,[6] this substance is a proteolytic enzyme which splits off angiotensin-I from alpha-2 globulin which then becomes angiotensin-II, an active vasopressor agent. Hypertension associated with renal ischemia was first described by Goldblatt, *et al.*[7] and by Page.[8] More recently, surgical investigations have emphasized the role of arteriosclerotic plaques and small aberrant renal arteries in producing total[9] and localized[10, 11] areas, respectively, of renal ischemia. More rarely an aneurysm of the abdominal aorta at the site of the renal artery may produce a similar situation.

Acquired Renal Infections

The role of chronic pyelonephritis in the production of hypertension is a widely debated point. Many workers insist pyelonephritis *per se* does not lead to hypertension and that in patients with pyelonephritis and hypertension either the hypertension was primary or the anatomical abnormalities of the kidney predisposed to both the hypertension and the infection. Certainly, all physicians have seen patients with severe and persistent pyelonephritis in whom no hypertension was present. Others suggest from experimental studies that pyelonephritis produces a periarteritis in the areas of involvement and that this is the basis for arterial hypertension. It seems reasonable to assume that under clinical circumstances certain cases of undetected pyelonephritis may persist for some time and lead to extensive renal parenchymal damage without hypertension.

Case Report 3

C. W. This 11-year-old white female was first seen because of generalized edema and found to have proteinuria, hyperlipemia, and hypoproteinemia. She gave a history of typical episodes of the nephrotic syndrome from the age of 4 years but no history suggestive of pyelonephritis. Blood pressure was 100/70. Renal biopsy revealed several areas of long standing pyelonephritis with extensive renal parenchymal destruction. While the relation of pyelonephritis to her nephrotic syndrome remains obscure, no hypertension has developed as a result of fairly extensive renal involvement.

Unilateral Pyelonephritis

By contrast, unilateral chronic pyelonephritis with renal parenchymal fibrosis leading to an atrophic kidney is usually associated with some degree of hypertension. If this situation is allowed to persist, secondary damage in the noninfected kidney due to persistently elevated blood pressure may lead to fixed hypertension, even after the contracted pyelonephritic kidney has been removed.

Case Report 4

N. S. S. was first seen at the age of 9 years with the complaint of severe headaches for two years. History revealed that she had experienced episodes of unexplained fever since the age of 4 years and had been treated each time with short courses of antibiotics. She had always seemed to have some trouble in initiating urination. Examination revealed a small child (height and weight average for a 6½-year-old) who did not appear acutely ill or uncomfortable. Blood pressure in upper extremities was 170/130 and in lower extremities was 200/140. Funduscopic examination revealed a grade 3 hypertensive retinopathy. The heart was moderately enlarged. Laboratory examinations were within normal limits. Postvoiding catheterization revealed a residual urine volume of 125 cc. Excretory urograms demonstrated prompt excretion of dye on the left and the delayed appearance of dye on the right. The right kidney was noted to be quite small and the left kidney definitely larger than normal. Table 2 lists the results of clearance studies. The contracted right kidney was removed, and on the fourth postoperative day the blood pressure returned to a normal range of 120/80. Improvement in renal function was demonstrated by repeat studies on the sixth and 180th postoperative days.

Most workers believe that the congenitally hypoplastic kidney with its small artery and vein is not a cause of hypertension.

TABLE 2

RENAL HEMODYNAMIC STUDIES IN A PATIENT WITH ARTERIAL HYPERTENSION AND UNILATERAL PYELONEPHRITIS WITH ATROPHIC KIDNEY (N.S.S.)

Time	*Blood Pressure mm. Hg.*	*GFR (cc/min)* Right	*GFR (cc/min)* Left	*ERPF (cc/min)* Right	*ERPF (cc/min)* Left
Preoperative	170/130	5	22	*	91
Postoperative 6 days	120/80	—	52	—	297
Postoperative 180 days	110/75	—	56	—	284
Normal**	105/70	35	35	175	175

* Values too low to measure.
** All renal function values corrected to 1.0 M^2 Surface Area.

Hypersensitivity States

If the diseases in childhood associated with hypertension were presented in the order of frequency, acute glomerulonephritis would lead the list. Elevation of blood pressure is present in approximately 70 per cent of children with acute nephritis and along with edema and hematuria characterizes the classical form of the disease. In the majority of patients, hypertension is limited to the acute stage and is not severe. In typical patients there is an initial rise in blood pressure which occurs with or shortly following the first evidence of clinical illness. During this period the blood pressure shows marked lability and a tendency to increase for the first three to five days; then it tends to gradually fall toward—but usually not to—normal. This initial blood pressure rise parallels the period of reduced urine volume and marked edema, and the fall in pressure is usually associated with the period of clinical improvement and increase in the urine volume to near normal value.

After a variable interval of one to five days, the trend in pressure is again upward. This may occur at a time when the patient's clinical appearance otherwise continues to improve. This second period of elevated blood pressure is usually more persistent and shows less daily variation. It may last one to six weeks and then very gradually return to normal. In mild acute glomerulonephritis only the first phase hypertension may be present; in more severe cases the second phase may be prolonged and difficult to manage. In general, the blood pressure elevation of the first phase is more responsive to hypotensive therapy than that of the second phase.

Case Report 5

E. L. B. gave a history of being well until two to three weeks prior to admission when she developed multiple pustular lesions over her legs. These were not treated specifically but improved. Five days prior to admission she noted swelling of face, abdomen, and extremities and the onset of progressive malaise, anorexia, and pallor. Admission examination revealed an alert, markedly edematous child in no distress. Blood pressure was 220/140. Healing lesions over legs were noted. Her BUN was 82 mg. per cent. The urine showed gross hematuria and 4+ proteinuria. A diagnosis of acute nephritis was made. Figure 1 indicates her acute hospital course and the plan of treatment of her hypertension. A follow-up evaluation two years later revealed no hypertension or evidence of renal disease.

Characteristically, the hypertension associated with acute glomerulonephritis is readily controlled by parenterally administered reserpine[22] and/or hydralazine (Figure 1). Doses of reserpine in the range of 50 to 100 Mg/Kg body weight given intramuscularly are usually adequate to produce a satisfactory decrease in blood pressure in from one to three hours. The pressure then remains down for from 8 to 12 hours, sometimes for 24 hours, following a single dose. Because of the individual variations in the duration of effectiveness of a given dose, it is desirable to repeat medication not oftener than every 8 to 12 hours and preferably only when a tendency to a rise in blood pressure is detected.

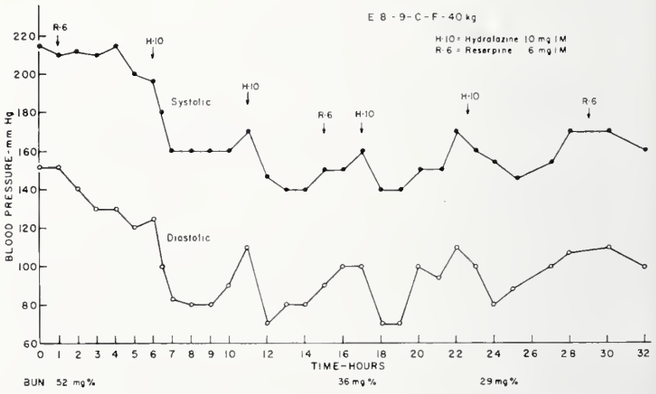

Figure 1. This patient had severe hypertension with acute nephritis that progressed for two weeks. The combined use of reserpine plus hydralazine was necessary to control blood pressure.

Patients whose hypotensive response to a single dose as high as 150 Mg/Kg is not adequate are not likely to respond to higher doses, and hydralazine should be added. This is usually done on an individual basis by titration, initially giving a dose of 5 mg. parenterally and noting the hypotensive effect. Subsequent doses are then increased as necessary to provide adequate antihypertensive effect. It should be emphasized that only parenterally administered reserpine is of value in acute hypertension since the oral form requires 7 to 14 days to influence the blood pressure significantly. Parenteral reserpine in large doses sometimes leads to a parkinsonian-like state, which is reversible when the dose is reduced or omitted.

Chronic Glomerulonephritis

Chronic glomerulonephritis is more often seen in the older child or adolescent and is far less common than acute streptococcal glomerulonephritis. A mild elevation of diastolic and systolic pressure may be the first clinical evidence which leads the physician to suspect chronic nephritis. The finding of protein and red blood cells in the concentrated urine specimen, often in small quantities, is of further diagnostic value. As the disease progresses and evidence of renal insufficiency begins to appear, the blood pressure elevation is more definite and persistent. At this point it would appear that the hypertension *per se* accelerates the process of glomerular destruction and, if not controlled, hastens the appearance of glomerulosclerosis, renal failure, and death. Since little can be done to delay or minimize the chronic nephritis, efforts at blood pressure control are particularly important. Some of these patients will do well on reserpine alone in oral doses of 0.25 mg. three times a day. More often reserpine may serve as a base line antihypertensive agent on which is superimposed the hypotensive effect of a ganglionic agent. Since the latter may produce severe constipation and usually requires the daily administration of cathartics, a trial of three to six weeks on reserpine alone is indicated. Initial parenteral (intramuscular) reserpine for three to five days may hasten the appearance of the desired antihypertensive effect.

Idiopathic Nephrotic Syndrome

The idiopathic nephrotic syndrome in childhood is infrequently associated with significantly persisting morphologic renal change or with hypertension in the early phases. Since the nephrotic syndrome is a descriptive term that may be applied to any patient presenting massive edema, marked proteinuria, hyperlipemia, and hypoproteinemia, patients with pyelonephritis, chronic glomerulonephritis, amyloidosis, or diabetic glomerulosclerosis may present a nephrotic syndrome. In addition, certain children with the idiopathic nephrotic syndrome may progress to a chronic phase with extensive renal damage and hypertension. The proper use of adrenal glucocorticoid compounds may ameliorate or arrest progress of the disease.[12] Management of the hypertensive problem in these patients is similar to that described under chronic nephritis.

Collagen Diseases

Collagen diseases such as disseminated lupus erythematosis and periarteritis nodosa are frequently associated with renal pathology and hypertension. These conditions occur most frequently in older children and affect females more often than males. The presence of proteinuria, hematuria, and other evidences of renal disease in the course of a collagen disease suggests that the prognosis is grave and that adrenal steroid therapy may not be completely successful in controlling the disease. The clinical manifestations of the disease such as headache, however, may be relieved by treatment directed at the reduction of blood pressure. Steroid therapy of the collagen disease in doses sufficient to control signs and symptoms often increases the tendency to elevation of blood pressure. These patients should be treated with appropriate doses of steroids—usually one of the delta-1 derivatives: prednisone, prednisolone, or triamcinolone—and simultaneously the blood pressure should be treated with reserpine.

Miscellaneous

Several other conditions primarily affecting the kidney are commonly associated with hypertension. These include Wilm's tumor and Hurler's disease. In the former a massive tumor within the renal capsule leads to vascular ischemia. Removal or x-ray therapy to the tumor will usually eliminate the hypertension. In Hurler's disease the kidney is large and hypertension of mild degree is common. Evidence suggests this disease is the result of abnormal acid mucopolysaccharide metabolism with the accumulation in tissues of heparitin sulfate and chondroitin sulfate-B. The relation of this defect to the kidney is uncertain.

Case Report 6

A. S. This colored, male child was first seen at the age of 4 years. From the age of 12 to 18 months he had demonstrated the typical stigmata of Hurler's

disease, namely, short thick hands, lumbar kyphosis, chronic nasal obstruction, protuberant abdomen with large liver and spleen, large head, and mental deficiency. Radiographic examinations revealed abnormal cartilage growth, delayed ossification of the epiphyses, and failure of normal conversion of cartilage to bone. A younger male sibling was similarly affected. The patient died suddenly of acute pneumonia. Examination of the kidney revealed no unusual histologic finding in the interstitial tissues or the blood vessels but showed a peculiar hyperplasia of the glomerular epithelial cells.

CARDIOVASCULAR DISEASE AND HYPERTENSION: CONGENITAL CONDITIONS

Coarctation of the aorta is the most common cardiovascular condition causing systemic hypertension in childhood. Usually the degree of hypertension is not marked. Depending upon the location of the stenosed aortic segment, one or both upper extremities may show an elevated blood pressure. Though pulsations in the lower extremities are difficult to palpate because of the narrow pulse pressure, the actual mean blood pressure in the lower extremities is not low. Resection of the aortic defect relieves the vascular abnormality, and the blood pressure gradually returns to normal.

Case Report 7

R. L. C., an 11-year-old white male, two months prior to admission developed gross hematuria and moderate proteinuria. Examination revealed hypertension in the upper extremities (blood pressure 160/100) but a very weak femoral pulse and no obtainable blood pressure in the lower extremities. Urinalysis at the time of hospitalization revealed marked microscopic hematuria, 1+ proteinuria, but no casts. Blood chemical examinations were all normal. Angiography demonstrated an area of coarctation of the thoracic aorta below the level of the subclavian artery. Because of the hematuria, renal function studies were carried out preoperatively (Table 3), repeated in one week, and then eight months following resection of the stenosed aortic segment. The immediate postoperative studies suggested a relative renal hyperemia which had disappeared eight months later. The hematuria cleared about two months following surgery, and all subsequent urinalyses have been normal.

TABLE 3

INFLUENCE OF SURGICAL RESECTION OF A COARCTATION OF THE AORTA ON BLOOD PRESSURE AND RENAL FUNCTION (R.L.C.)

Time	*Blood Pressure mm. Hg.*	*GFR* (cc/min)*	*ERPF* (cc/min)*
Preoperative	160/100	87	299
Postoperative 7 days	120/100	99	338
Postoperative 8 mos.	125/75	76	293
Normal	105/70	70	350

* Values corrected to 1.0 M^2 Surface Area.

Aortic Valvular Stenosis

Congenital aortic valvular stenosis in childhood is usually associated with a diastolic elevation of blood pressure and a narrowing of the pulse pressure. The presence of the characteristic harsh systolic murmur and thrill over the aortic area, transmitted to the neck vessels, suggests the malformation.

Patent Ductus Arteriosus

Patent ductus arteriosus when large may be associated occasionally with a mild elevation of systolic pressure in late childhood. However, the diastolic pressure is low and the pulse pressure is wide, so the mean blood pressure is normal.

Acquired Cardiovascular Disease

Rheumatic heart disease with severe aortic valvular insufficiency is sometimes associated with a moderate systolic hypertension and widening of pulse pressure.

Cardiac Failure

Cardiac failure of severe degree on any etiologic basis may be associated with a rise in diastolic blood pressure and consequent narrowing of pulse pressure associated with increased peripheral vascular resistance due to tissue anoxia.

Anxiety and Fear

Anxiety and fear are emotional responses common to most people when visiting a physician's office. The child who has experienced many immunization and antibiotic injections is a particularly reluctant visitor to the medical examining room. It is not surprising, therefore, that the child's blood pressure may be elevated and the pulse quickened at the sight of the physician. However, with time and proper reassurance this problem usually passes.

Not quite so transient is the elevation of pressure seen in older children in association with family, social, school, or religious tensions. These subjects often complain of severe headaches, ma-

laise, and nervousness. The only abnormal physical finding may be a modest elevation of blood pressure. Careful inquiry into the environment, family history, and attitudes, and the child's activities may reveal the origin of the patient's anxiety. An emotional basis for his symptoms will be completely acceptable to the child and his parents only when renal and other causes of hypertension have been carefully sought and ruled out. In some patients the use of an ataractic such as reserpine in doses of 0.1 to 0.25 mg. three times a day may be helpful. These patients should be watched in the future for signs of more significant and persistent hypertension.

Case Report 8

G. M., an 11-year-old white male, was well until one week prior to admission, when he developed a severe headache while running at school. He was noted to be pale and dizzy. At a physician's office the only abnormal finding was a blood pressure of 170/110. The patient was hospitalized for observation; during this period arterial blood pressure determinations varied widely but were usually elevated. After several days the values fell to a normal range. Intravenous pyelographic studies were normal, as was a concentrated urine specimen. Regitine produced no fall in blood pressure, and the catechol amines were 2 mg/24 hours. The patient enjoyed being in the hospital and was reluctant to leave at the time of discharge. The father then pointed out that the patient had recently transferred to a new school where the homework was unusually heavy. In addition, the boy joined the local football team this year for the first time, an activity entered into more because of the father's insistence than his own desire. Football was discontinued for the remainder of the year; the boy was given some help with his school work by an understanding teacher. He has remained asymptomatic, and the blood pressure is normal.

Vasopressor Agents

Vasopressor agents as a cause of hypertension in childhood are uncommon, even in asthmatic children, but their influence should be kept in mind when a child with elevated blood pressure is seen.

Steroid Therapy

Corticotropin and adrenal cortical steroid therapy is an increasingly common cause of hypertension in the hospital practice of medicine. Although the newer delta-1 derivatives of cortisone and hydrocortisone (prednisone, prednisolone, triamcinolone, and methyl prednisolone) show less tendency to cause disturbances of water and salt metabolism and increases in blood pressure, they are by no means devoid of these properties. In the massive doses necessary to treat nephrosis, collagen diseases, and rheumatic fever, adrenal steroids frequently produce some elevation of blood pressure. This effect can usually be minimized by providing the patient a low salt diet and, where necessary, by adding parenteral or oral reserpine. Marked hypertension is usually not amenable to hypotensive or dietary treatment and is an indication for reduction or withdrawal of steroid therapy. Patients with reduced renal function are particularly prone to show marked hypertension in response to steroid therapy, and some may even become oliguric and azotemic under these circumstances. Steroid therapy in chronic nephritis should therefore be used with great caution and a careful regard for these potential complications.

Case Report 9

D. L., a 5-year-old-white male, developed the nephrotic syndrome at the age of 2½ years. He was treated intermittently with ACTH and later steroids, with partial loss of edema but little change in his fairly marked proteinuria. For the past year his BUN had ranged from 18 to 28 mg. per cent. It is also of interest that each period of corticotropin or steroid therapy was associated with a rise in arterial blood pressure. Because of the severe edema and proteinuria with marked hypoproteinemia and hyperlipemia, he was given another trial of steroid therapy. Base line blood pressure was 110/80. After several days of observation he was begun on triamcinolone, 10 mg. every six hours. On the sixth day of treatment blood pressure rose to 160/110, and in spite of reserpine therapy it remained at this level. By the 12th day of treatment there was increasing abdominal fluid, and on the 20th day marked ascites and reduced urine volume. These findings plus a rising BUN led to paracentesis and the withdrawal of steroid therapy. The patient then gradually lost most of his edema as the urine volume increased, and the BUN returned to normal.

ENDOCRINE DISORDERS AND HYPERTENSION

Hyperthyroidism in childhood, though not common, occurs with sufficient frequency to be considered here. As in the adult, the changes in blood pressure are associated with a rapid pulse, a high cardiac output and low diastolic pressure leading to a wide pulse pressure. Cardiac failure is uncommon in childhood hyperthyroidism in the absence of underlying organic heart disease, although some degree of left ventricular hypertrophy is usually present. Reserpine therapy has been shown by Canary *et al.* to effectively relieve or mask the clinical signs and symptoms of hyper-

thyroidism, though it does not appear to affect the hyperfunctioning state of the thyroid gland.[14]

Case Report 10

A. S. was first seen at the age of 3½ years with the history that one to two months earlier he had begun to lose weight, to be extremely nervous, and to sweat excessively. Examination revealed a malnourished, anxious, trembling child who was sweating profusely. There was bilateral exophthalmos and marked enlargement of the thyroid gland. The pulse ranged from 140 to 160, and the blood pressure range was 140 to 160/60 to 70. The uptake of a tracer dose of I^{131} was 68 per cent in 24 hours, and the protein bound iodine was 12 μg per cent. In the untreated state his GFR was 130 cc/M^2/minute (normal, 70); the ERFP was 565 cc/M^2/minute (normal, 350); the hematocrit was 35; and the Tm PAHA was 53 mg/M^2/minute (normal, 45). The patient was treated with oral Tapazol (10 mg/6 hrs.). The clinical and laboratory evidence of the hyperthyroid state cleared over a six to eight week period. A gradual reduction in the size of his thyroid gland to normal occurred in the next 8 to 12 months.

Cushing's Disease

Cushing's disease is a rare endocrine disorder of childhood and is more often associated with an adrenal carcinoma than with diffuse hyperplasia of the adrenal. The patient usually demonstrates typical girdle obesity, hirsutism, acne, seborrhea, a florid complexion, striae and arterial hypertension. Laboratory studies reveal polycythemia, a hypokalemic-hypochloremic alkalosis, and a variable increase in the urinary excretion of 17-OH corticosteroids. Treatment consists of careful preoperative preparation and subsequent surgical removal of the involved adrenal gland or, in the case of diffuse hyperplasia, the subtotal removal of both glands. Hypotensive drug therapy has little to offer these patients and is probably not indicated.

Pheochromocytoma

Pheochromocytoma of adrenal medullary or sympathetic origin has been described infrequently in the pediatric age group. Nevertheless, since it often represents a completely curable type of hypertension, it should be considered. Hypertension in children due to pheochromocytoma is usually sustained rather than paroxysmal, through short periods of more marked elevation of blood pressure may occur as superimposed episodes.[15] Nervousness, anxiety, excessive sweating, and headache are all common symptoms; constipation, polyuria, polydypsia, weight loss, and palpation are not infrequently present. Regitine in doses of 1 to 5 mg. or piperoxane in doses of 5 to 10 mg. leads to a prompt fall in blood pressure. For diagnostic studies the intravenous or intramuscular routes are preferred.

The recent development of accurate laboratory methods for the quantitative estimation of urinary catechol amines offers an even more specific test for the presence of excessive epinephrine and norepinephrine secretion. In patients with cardiac hypertrophy or frank cardiac failure, the medical control of hypertension with oral regitine may be necessary and very helpful in preparing the patient for surgery. Surgical removal of the tumor is an exacting process since the mass is often small and difficult to locate. Adjunctive use of intravenous regitine or Neo-Synephrine may be necessary during the surgical procedure and in the period immediately following tumor ligation.

Case Report 11

W. B., a 4-year-old white male, was well until the age of 2 years when he developed the progressive onset of irritability, headache, night sweats, weight loss, polyuria, polydypsia, and constipation. Minimum proteinuria plus polydypsia, polyuria, and dilute urine specimens suggested chronic nephritis; however, a concentration test readily led to a urine specific gravity of 1.028. Intravenous pyelography suggested a mass in the right suprarenal area, and intravenous regitine and benodioxane tests each produced a prompt reduction in blood pressure. While the patient was maintained on oral Regitine for two weeks he was asymptomatic and gained weight. The tumor was then removed. The child is now 9 years old and has had no further difficulties. His weight gain and growth in subsequent years have been normal.

Primary Aldosteronism

Primary aldosteronism due to an aldosterone-secreting adenoma of the adrenal cortex or bilateral cortical hyperplasia is a recently recognized condition first described by Conn. Instances of this condition in the pediatric age group have also been described.[16] These patients show marked hypertension with a consistently demonstrable hypokalemic-hypochloremic alkalosis often associated with episodes of marked muscular weakness.[17] Treatment consists in the localization and removal of the hyperfunctioning adrenal cortical tissue.

Congenital Adrenal Hyperplasia

Congenital adrenal hyperplasia with either virilism in males or pseudohermaphroditism in females represents a partial defect in the adrenal cortical synthesis of hydrocortisone. In the classic form there is a defect at the level of 21-hydroxylation and hypertension is not present. In certain

forms of this syndrome, however, there is a defect in 11-hydroxylation so that excessive amounts of 11-desoxycorticosterone (DOC) and 11-desoxy-17-hydroxycorticosterone (Cpd S) are formed.[18] These patients have hypertension, presumably in association with the excess DOC and Cpd S production. Diagnosis of congenital adrenal hyperplasia is based upon the finding of elevated urinary levels of 17-ketosteroids and pregnanetriol; in hypertensive subjects the diagnosis is based upon the finding of the reduction product of Cpd S in the urine as well. Replacement therapy with hydrocortisone removes the excessive stimulation of the adrenal gland by corticotropin; thereafter, the production of DOC and Cpd S decreases as the hypertension and other abnormal clinical features of congenital adrenal hyperplasia gradually recede.

METABOLIC DISTURBANCES AND HYPERTENSION

Hypercalcemic states may exist in relation to hyperparathyroidism, multiple myeloma, the milk-alkali syndrome, vitamin D intoxication, prolonged immobilization, and idiopathic hypercalcemia. In children the first three conditions are extremely rare and the others are uncommon. The mechanism of the hypertension associated with hypercalcemia is obscure, but Goormaghtigh has shown in dogs that hypertension appears to be related to the appearance of lesions in the media of the renal arterioles as well as to the marked deposition of calcium along the basement membrane of the renal tubules.[19] Haddy has shown experimentally that acute calcium infusions cause arteriolar constriction when blood values exceed 13 mg. per cent.[20]

Anoxia

Anoxia and hypertension are not an uncommon clinical combination in patients with severe bronchiolitis, asthma or respiratory muscle paralysis and in patients who are receiving artificial respiration. The exact role of anoxemia and hypercapnea in the production of hypertension in these conditions is debated; and since the hypertension is mild, treatment of the primary disease or condition is usually the only indicated therapy.

CENTRAL NERVOUS SYSTEM DISEASE AND HYPERTENSION

Expanding lesions of the central nervous system in children, as in adults, may lead to arterial hypertension. In general, the more rapidly expanding lesions are associated with the more severe and acute hypertension. Central nervous system disease as a cause of hypertension has been described in relation to encephalitis, hemorrhages, infections, trauma, cerebral anoxia, and lead poisoning as well as in relation to intracranial tumors. The elevation of blood pressure is usually transient, and spontaneous or therapeutic alleviation of the primary disorder is associated with a return of the blood pressure to normal.

IDIOPATHIC OR ESSENTIAL HYPERTENSION

Idiopathic or essential hypertension in childhood is rare. Those patients described have the classic signs and symptoms of hypertension, namely, headaches, convulsions, poor weight gain, cardiac enlargement, and retinal vascular changes. The diagnosis of essential hypertension is established only after exhaustive search for specific etiologic factors (Table 1) has been unrevealing. It is a diagnosis to be entertained only when all known causes of hypertension have been excluded. The therapeutic use of oral reserpine in progressively increasing amounts to tolerance (*i.e.,* the onset of prominent side effects) is recommended by Haggerty,[21] with gradual addition of ganglionic blocking agents as necessary in patients who are not controlled by reserpine alone.

Case Report 12

J. A. was first seen because of a blood pressure of 150/100 obtained during a physical examination for headache. No other abnormal physical findings were noted. Rest in the clinic and repeated blood pressure determinations led to a gradual reduction to 130/85. Urinalysis was negative, as were blood chemical studies and intravenous pyelography. The patient was followed at intervals for six months on an outpatient basis. Recorded blood pressures varied from 170/110 to 130/85. Renal function studies done at a time when the blood pressure was 145/90 revealed a GFR of 108 cc/M^2/min and an ERPF of 400 cc/M^2/min. In the hospital histamine and phentolamine tests were negative. With bed rest the pressure fell to 130/85 but rose to 150/100 as soon as full activity was allowed. Two years later the blood pressure remained 150 to 160/90 to 105. He is maintained on oral reserpine (0.25 mg. three times a day) and is asymptomatic. A recent renal biopsy revealed normal glomeruli and tubules. The only abnormal findings were in the afferent arterioles, all of which presented some degree of hyperthrophy of the smooth muscle coat. Many of the interlobular arteries presented a similar hypertrophy with some hyperplasia of the intramural connective tissue. These changes are compatible with benign hypertension.

SUMMARY

1. The determination of systemic blood pressure in infants and children is an important,

though sometimes neglected, part of the physical examination.

2. The finding of an elevated arterial blood pressure should be considered an indication for a thorough etiologic investigation. In most patients a renal basis will be found.

3. However, there are important nonrenal causes of hypertension, the successful management of which depends upon their early recognition and treatment.

4. In general, a specific etiologic basis for childhood hypertension can be found. ★★★

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NOTE: Throughout, the renal function studies have been shown corrected to 1.0 M^2 Surface Area. GFR refers to Glomerular Filtration Rate measured by the clearance of inulin and ERPF refers to the Effective Renal Plasma Flow measured by the low level clearance of para-aminohippurate. For details see reference 22.

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HEPATITIS EPIDEMIC FORECAST

Epidemic prediction: Watch for outbreak of hepatitis, both infectious and serum, this fall. Dr. Donald Henderson of the U. S. Public Health Service in Atlanta, reports the disease has both an annual and a cyclical record for appearing and disappearing. Next scheduled appearance is late this fall.

The Mentally Deficient Child: A Doctor Talks to Parents of Cerebral Palsy Patients

PAUL LÜTKEN, M.D.
Aalborg, Denmark

This article was originally published in The Spastic, a Danish monthly paper for the parents of cerebral palsied children. In clear and concise language, the author explains the nature of the condition and what may be done for the victims. Jorgen Brier, Aalborg, Denmark, translated the paper for Journal MSMA.

JUDGING THE MENTAL DEVELOPMENT of a child may present extremely difficult problems to the doctor. But if he comes to the conclusion that the child's mental powers have suffered some injury, he may experience even greater difficulty in making the parents understand and accept the condition of the child. The reader may wonder why, as an orthopedic surgeon, I should take up this problem, but the old phrase about a sound mind in a sound body contains a profound truth. I have come up against the combination of physical and mental handicaps so frequently that I have simply had to give a great deal of time and thought to the problems involved.

In describing a person's mental powers, we often use with remarkable aptness the phrase that he or she is (more or less) gifted. Our intellectual equipment is, truly, something that is given to us —a gift on which the individual has no influence whatever. It is determined by innate or, to be more precise, hereditary factors. The intellectual aptitudes of the offspring primarily reproduce those of its parents, though, naturally, the child may also bear the stamp of previous generations of its stock. This is the fundamental principle which will condition the intellectual capacity of the individual so long as no harmful external influence interferes.

Let us for a moment consider the concept of intellectual normality. This can be defined by purely practical methods. If a large population is tested, the level of intelligence found in the greatest number of cases may be taken as the absolute normal. This group may be described as possessing 100 per cent intellectual capacity. But, as has already been hinted, there is a dispersion around the absolute normal. Gifted or brilliant persons will be above 100 per cent, and less gifted, below 100 per cent. It has become customary to indicate the intelligence level of any individual by stating the percentage of the normal which he or she is found to possess. This figure is called the intelligence quotient or IQ. An IQ of 100, then, describes a person of average intelligence.

To allow for what is regarded as normal dispersion, it has been agreed to include IQs between 90 and 110 among the normally gifted. This group comprises the great majority of a population.

On either side of this large majority, smaller groups are found of particularly gifted or particularly poorly equipped individuals. Comparatively exact, or at least serviceable, methods have been worked out to determine IQs below 100, while exceptional brilliance is far more difficult to evaluate and can often be only roughly estimated. However, there can be no doubt that purely hereditary deviations from the normal are the rarer the greater they are, both above and below the normal. If everything depended solely on hereditary factors, mental deficiency would be as rare as genius, or, to use figures, IQs of 60 or less would be neither more nor less frequent than IQs of 140 or more.

However, statistics show a good many more low IQs than could be expected from pure heredity. Clearly, therefore, other than hereditary factors

must have been at work in a considerable number of persons with low IQs.

With this axiom in mind, the mental development of the normal child will now be considered. At birth the brain is not fully developed. Its development progresses with the growth of the child, and while it is not certain how long it continues, it is an accepted fact that mental development goes on beyond the years of childhood proper. A newborn baby does not reveal its ultimate intellectual level. Only gradually will its capacities develop in accordance with its intellectual heritage.

HEREDITY'S PART

How much may its parents hope for? The answer is that they may expect their child's intelligence to be on a level with their own. Only if the parents differ markedly in intelligence, are similar differences to be expected among a family of many children. In practice, marked differences in intelligence between husband and wife are bound to be the exception. The choice of a partner is not just a matter of sexual attraction. The normal thing is for the two parties to be fairly well matched all around. In other words, most parents may reasonably expect the gratification of seeing their children enter into possession of their own characteristics—desirable and less desirable. Thus, there is no reason to expect or fear in the children conflicts that are unknown to the parents themselves.

However, a child's mental development is not determined exclusively by heredity. The provision of such material comforts as food, clothing, housing, as well as the intellectual and spiritual blessings of a good atmosphere, upbringing, training, and general education are essential if the child is to derive full benefit from its inherited characteristics.

Each new step forward through the vast programme of experiences and accomplishments a growing child has to master will be greeted with joy by its parents, and as long as the development of the child keeps pace with its age, the family will enjoy contentment and harmony.

PROGRESS STANDARDS

How can the mental progress of a child be measured to ascertain if it is developing according to schedule? Here, as in the case of IQ evaluation, statistical experience has fixed certain standards of progress for each year between three and 15. Details are not necessary here. However, it may be noted there is a lack of standards after the age of 15. Up to that age it is possible to examine sufficiently large homogeneous groups, while after 15, education and training are differentiated to such an extent that no general standards can be established. In fact, by the age of 15 the mental development of the adolescent is so far completed in its essentials that what is added later cannot be usefully measured.

MENTAL AGE DETERMINATION

By the statistical methods—and with the limitation—mentioned above, it is possible roughly to determine a child's mental age. If it is found that the mental development of a ten-year-old child is that normally found in children of seven, its intelligence level is described as seven-tenths of the normal, or its IQ is said to be 70. Supposing the same child is retested at intervals of one or several years and it is again found to be behind. It will still be some 30 per cent below other children of its own age. This does not mean that the child does not develop, only that it fails to catch up. By the laws of heredity, the parents of such a child may be expected to be on a similar intellectual level. If they are, no conflicts should arise.

If, on the other hand, it turns out that the intelligence of both parents is normal, or even supernormal, the backwardness of the child presents a striking discrepancy which is likely to cause serious conflicts unless the nature of the problem is pointed out to the parents.

PARENTS' REACTION

Unfortunately, the parents' first reaction to any explanation is apt to be resentment. Their child may be a little backward, but mentally deficient —never! The doctor must be mistaken, an incompetent fool. The parents depart in anger, and the doctor is left with a keen sense of failure. He has been unequal to the task—admittedly an extremely difficult one—of explaining a tragic situation to the parents with sufficient tact to make them face the facts. He has failed in his efforts to create an atmosphere of confidence and cooperation in which ways and means of alleviating the consequences of an irremediable handicap might have been fruitfully discussed.

This negative reaction of the parents may be due to various causes. What they are, the doctor will never learn unless he ultimately obtains such contact with the parents as will enable both parties to discuss the matter calmly and objectively. In most cases, the true explanation is probably that the parents feel that they ought to know

their own child best, and that such signs of perception, memory, and intelligence that they have observed in the child justify a far more optimistic estimate of the child's development than that reached by the doctor. They conclude that the doctor's examination of their child is a superficial affair, and his opinion hopelessly wrong.

In other cases, one feels that the parents regard a mentally deficient child as a disgrace to themselves. The well-known dread of public institutions, too, is often an important factor. Parents fear that the child will be removed from its home to be sent to some impersonal and loveless institution. All these, and perhaps also other more or less conscious reactions make it hard for parents to accept the doctor's verdict.

THE DOCTOR'S ROLE

What can the doctor do to prevent such emotional reactions? This is the question I shall try to answer in the following.

I should like, first, to revert to what was said above: "If everything depended on hereditary factors, mental deficiency would be as rare a thing as genius." In actual fact, as was also pointed out above, the subnormal so far exceed the supernormal in numbers that other than hereditary factors must have been active.

Do we know any such factors which may injure the brain to such an extent as to affect the intelligence? The answer is that we do.

Several types of infection are known to attack the brain of the embryo or infant. Syphilis is the one that has been the longest known, though it does not now play the destructive part it used to do, since it is now an uncommon disease. Moreover, suitable treatment of the mother at an early stage of pregnancy can effectively prevent infection of the embryo.

But other diseases are known to attack the embryo. German measles (rubeola), apparently a trifling ailment, may leave the baby deaf and dumb or cause even more extensive injury to the brain if it attacks the mother in the early months of pregnancy.

CEREBRAL PALSY CAUSES

A certain parasite may produce what is known as toxoplasmosis, which in older children or adults causes nothing more serious than an inflammation of the intestines, but may, through the mother, invade the brain of the embryo, and the baby may be born an idiot. A number of viruses may also attack the brain in infancy. Add to this a number of other factors which undoubtedly exist, though their nature is yet unknown to us.

The causes of cerebral palsy or cerebral paralysis (of which spastic paralysis is the commonest variety) have been partly cleared up. It is known that it may be due to an insufficient supply of oxygen during birth. A serious attack of jaundice in the newborn baby may produce similar results. Babies born prematurely are more liable to cerebral palsy than others.

NO OBVIOUS REASON

In a number of cases, however, no obvious cause can be ascertained. Whether the cause is known or not, this much is certain—cerebral palsy is due to external influences resulting in more or less extensive destruction of brain tissue.

It will be easily understood that the seat and extent of the injury determines the symptoms of each particular case. The injury may be so extensive as to be lethal. In the children who survive, the injured regions are to be found mainly or exclusively in the cerebrum in which the superior centers that govern motion, sight, hearing, and speech are located. (The word "center" describes a limited region of brain tissue performing a specific function.)

A COLLECTIVE FUNCTION

What we describe as intelligence is also a function of the cerebrum, only it is not limited to any particular center, but is rather the collective function of the various activities of the brain. Nevertheless, intelligence is not an indivisible entity. Experience with cerebral palsy cases and their treatment shows that certain special faculties may be intact while others have dropped out completely. This is borne out by examination of the brains of children who have died of cerebral palsy. The lesions occur at random, so to speak, though certain extremely sensitive parts of the brain are particularly liable to attack.

Brain tissue is practically incapable of regeneration. But the functions of injured regions can partially be taken over by those left intact. Brain centers proper, however, can never be replaced.

Cerebral palsy, then, is a state of invalidity, not a disease in progress. Therapy must aim at making the fullest use of any surviving brain functions.

The main problem is reduced intelligence, which is found in a considerable number of cerebral palsy cases and a large factor is—what can be said to their parents?

First of all, it can be said that their child should by the laws of heredity have grown up with normal equipment, but for a catastrophe due to external factors which has caused serious permanent in-

jury to some parts of its brain, leaving others intact. As a result, some faculties are normal, while others have suffered. It is only natural that the parents should cling to any encouragement their own observations may have given them, but it is the duty of the doctor to sum up the whole situation, good points and bad. He must point out that what has happened to their child is a misfortune that cannot be put right again. It is a tragedy, but can never be a disgrace to them. From such a starting point it should be possible for doctor and parents to come to an understanding that anything that profits the child shall be done, and that it is sometimes in the best interests of the child that the benefits offered by public care for mentally deficient should be accepted.

SPECIAL HOMES?

It is sometimes objected that cerebral palsy patients ought all to be placed in special homes for such cases. My answer to this is: There is a wide gulf between those who suffer from only a slight physical handicap and those who are more or less mentally deficient. Only a short time ago, two girls suffering from cerebral palsy were admitted to my clinic for surgical treatment. One was just slightly backward, while the other came from a home for the mentally deficient. Both, incidentally, were victims of the same type of cerebral palsy, though in different degrees. Both were operated on to enable them to walk. For some time they were in the same ward, but the more intelligent gave expression to infinite contempt for the mentally deficient girl and resented sharing a room with her. After it had proved hopeless to make her see that she and the other were sufferers from the same sort of defect only in different degrees, we had to move her into another ward.

ASSORTMENT BY MENTALITY

This is just one example among many that prove that patients are better assorted by mental levels than by physical diagnosis. In other words, too wide IQ differences between children who are thrown together for any length of time may be harmful both in exposing those of the lower intelligence to undesirable inferiority complexes and in retarding or warping the development of the more intelligent.

Evidently, this must apply, too, to any family where a backward or mentally deficient sufferer from cerebral palsy is found among normal brothers and sisters. The claims of the normal children must not be overlooked.

On the other hand, a married couple, who have suffered the misfortune of having a cerebral palsied child, should not allow this to keep them from having more children. It would be a mistake for them to cut themselves off from the blessings of normal parenthood. ★★★

FROZEN ASSETS FOR BLOOD BANKS

Insider's Newsletter reports good news for blood bankers and donors: A practical method has been found for long-term blood preservation. The U. S. Naval Hospital in Chelsea, Mass. has announced that it can freeze and keep blood for at least two years, possibly longer. Formerly, blood could only be kept about 21 days and then would have to be discarded as outdated.

This will mean: (1) the immediate reduction of blood wastage from outdating, (2) assurance of adequate supplies of rare types of blood without resorting to appeals for emergency donors, (3) greater chance for survival in any form of mass emergency when large quantities of blood are needed.

A Positive Approach to Perinatal Mortality Studies

JO NEWELL ROBINSON, M.D.
Columbus, Mississippi

With the advent of modern medical tools and drugs, many of the causes of infant death have been conquered. However, the first week of life is still a most hazardous time. The author discusses the "how-to" and the "why" of perinatal mortality studies and what they may accomplish. Charts, illustrating the problem of infant death in the United States and Mississippi, are given.

DOWN THROUGH HISTORY, infant death has been a cause of concern to society. Records show that Egyptian physicians hoped for the newborn to cry—an omen the child would survive.

Oliver Wendell Holmes, in teaching Harvard medical students, described the female pelvis as "the triumphal arch beneath which all heroes must pass as the first hazard along the path to their ultimate coronation."

Modern science has conquered many of the causes of infant death. There has been a dramatic reduction in mortality from infection and most physiological and anatomical defects can now be corrected by medical or surgical means. With these problems under control, attention is presently focused on perinatal mortality.

MSMA COMMITTEE

For the past three years, MSMA's Committee on Maternal and Child Care has concentrated on a backlog of maternal mortality data for 1957 and 1958. Having brought its maternal death studies up-to-date, the committee is now studying perinatal deaths.

Chart 1 gives the extent of the problem in the United States from 1915 to 1956. Chart 2 gives a similar analysis of the statistics in Mississippi from 1915 to 1955.

Although impressive reductions in death have been made in this country during the past 50 to 60 years, the causes of death during the first week of life have proved relatively resistant to control and are still unknown in a large number of cases. Edith Potter, in a monumental work, performed autopsies on stillborn infants to show that even in fetuses the cause may be determined in over 90 per cent of the deaths—some of which may be preventable.

Mere statistics, however, are not enough to spearhead an active campaign against perinatal mortality. Several approach methods have been devised: (1) the Gallup poll type which samples statistics from key hospitals—used in Detroit during the past six or eight years, (2) city-wide surveys as used in New York, (3) county-wide and state-wide questionnaires which have met with failure in many states, (4) the institutional approach on a local basis.

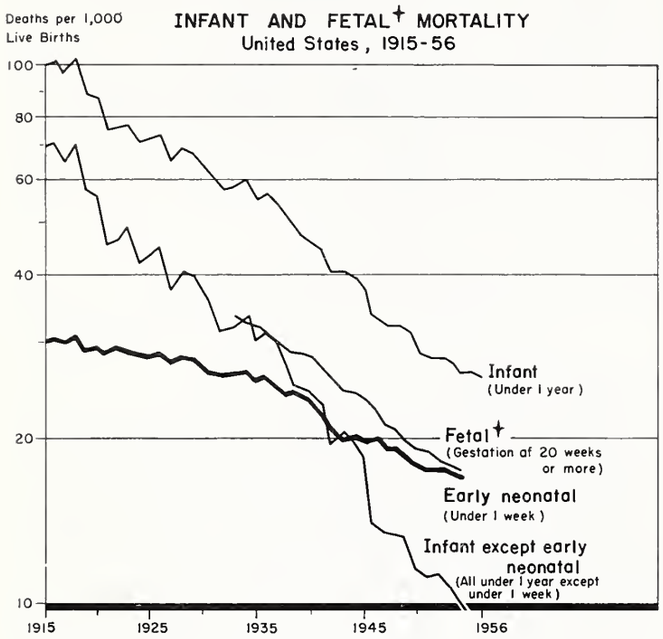
The last method, the local institutional approach, appears to be the best solution. It is important to have witnesses to the fetal or infant death who can give a complete clinical history and, in many instances, postmortem findings. A staff committee at the grass roots level can tabulate these findings better than anyone else and can actually reduce the hospital's mortality rate. The University of Mississippi Teaching Hospital has inaugurated a pilot program which is expected to stimulate state-wide interest in such studies.

STUDY GUIDE

A dynamic investigation can reduce perinatal mortality by determining preventable causes. *A Guide for the Study of Perinatal Mortality and Morbidity,* published by AMA's Committee on Maternal and Child Care, is recommended as a source of standard classifications. Perinatal mor-

tality is defined by the guide as "those deaths of fetuses and newborn infants occurring before, during, and soon after birth."

The guide recommends that studies include, at the minimum, deaths of fetuses weighing 1,001



† *Includes only fetal deaths (stillbirths) for which the period of gestation was given as 20 weeks (or 5 months) or more, or was not stated.*

gm. (28 weeks gestation) to deaths of infants occurring in the first seven days of life (hebdomadal period). Since 95 per cent of neonatal deaths occur during the first seven days, the hebdomadal period is sufficient to ascertain the majority of avoidable causes of death.

For more inclusive study, the guide suggests beginning with deaths of fetuses weighing 501 gm. or more (20 weeks gestation) and including infant deaths occurring in the first 28 days of life (full neonatal period).

1958 STATISTICS

Chart 3 shows that for the sample year of 1958 nearly one-half of the fetal and neonatal deaths were unknown or ill-defined. Such data should stimulate the use of more autopsies and thorough clinical histories in order to determine if the deaths could have been prevented.

Since 1915, infant mortality has decreased steadily. One in 10 live-born babies died before the end of its first year in 1915. By 1956 the proportion had dropped to one in 40.

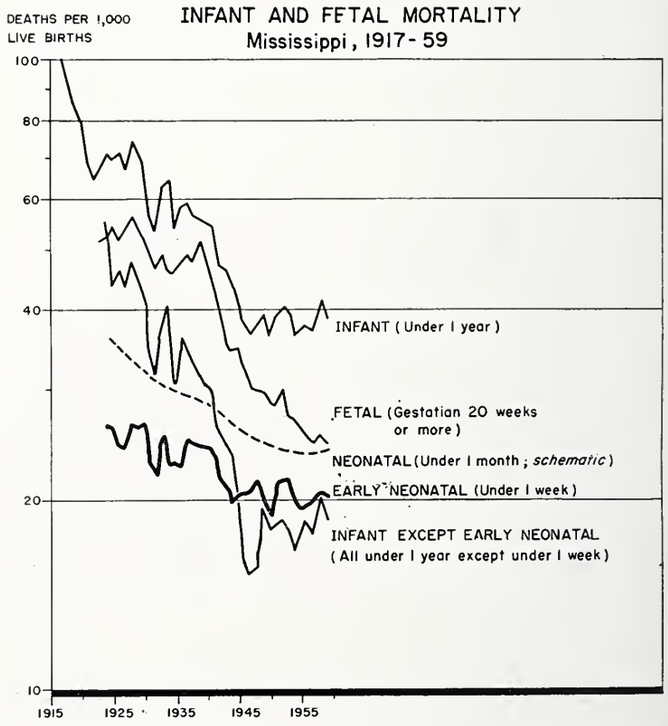
Science has been able to reduce mortality in some periods of infancy better than in others. Many diseases that formerly took high tolls of infants after their first week have been largely brought under control and practically eliminated. In general, these are the diseases associated with inadequate sanitation, poor hygiene, poverty, and low standards of living. Medical progress has also reduced mortality due to congenital malformations and respiratory and digestive diseases.

CONCENTRATION IN FIRST WEEK

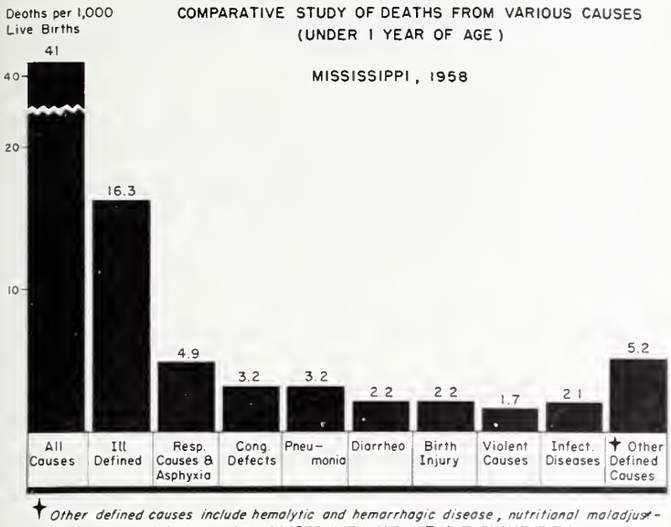
Today, infant deaths are largely concentrated in the especially hazardous first week of life. In 1915, less than a third of all infant deaths occurred in the first week of life, but in 1957 nearly two-thirds took place within that period. The causes of death during the first week of life have proved relatively resistant to control and in fact, are still unknown in a large number of deaths. The magnitude of the infant death problem is strikingly shown by national mortality statistics. The total number of perinatal deaths annually exceeds the total number of deaths in the age range of 15 to 44. Actually, past improvement as well as the current size of the problem may be larger than the statistics indicate.

Perinatal death studies indicate that prenatal care is one of the best means of preventing death. Many centers file standard prenatal records with the hospital of expected confinement at least two weeks in advance.

Mortality investigations produce results by separating the avoidable from the nonavoidable cases. This has been demonstrated at Ohio State University where thorough studies are conducted by a committee composed of an obstetrician, a pe-



diatrician, a pathologist, an anesthesiologist, and the nursing staff. Each case is worked up—complete with an autopsy report—and presented at a staff meeting much like a clinicopathological conference. When the primary cause of death is es-



✦ *Other defined causes include hemolytic and hemorrhagic disease, nutritional maladjustment, maternal factors. ALL CAUSES WITH AND WITHOUT IMMATURITY.*

tablished, the committee assigns responsibility to the physicians, parents or nursing staff. No death is left ill-defined.

Cases are divided into (1) nonpreventable and (2) preventable. Nonpreventable causes include extreme immaturity, complicating diseases such as diabetes, complications of pregnancy such as toxemia, and developmental defects. Responsibility for the preventable deaths may be assigned to the primary patient (parent) who failed to seek and heed advice or to professional management by physician, nurse, or hospital.

CONCLUSION

Immediate review of all perinatal deaths is imperative. Otherwise, vitally important, but unrecorded data, is often lost. This method of study is more accurate and informative than the use of questionnaire data.

The following ideals should be aimed for: (1) a complete case study of all fetal deaths, (2) a free exchange of ideas between practitioners, obstetricians, pediatricians, anesthesiologists, and pathologists, (3) objective self-criticism without attention to personalities, and (4) reappraisal of medical management, particularly in the areas of labor, delivery, and the newborn infant.

In reappraising medical management, these factors should be considered: (1) greater attention to the fetal heart rate in utero, (2) a decrease in premedication, particularly if a small infant is anticipated, (3) extension of the use of conduction anesthesia, (4) care to avoid amnionitis, and (5) greater speed and care in management of erythroblastosis fetalis, for example.

Of necessity, individual hospitals would have to adjust the perinatal mortality study to fit their facilities. Smaller hospitals would probably hold mortality study meetings less often and have less elaborate presentations. A simple case report furnished by the Committee on Maternal and Child Care should be used for analysis of data from the participating hospitals. This includes a simple tabulation of (1) vital statistics and physical examination, (2) obstetric diagnosis, (3) pediatric diagnosis, (4) pathological diagnosis, and (5) perinatal mortality classification including responsibility. All data would be confidential and available only for study by the participating hospitals. However, the results of such perinatal mortality studies should be made available for both professional and lay education. ★★★

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RUN THAT BY AGAIN, PLEASE

Notice sent out by London Hospital studying brain damage from boxing: "Gentlemen boxers who would care to further the cause of science by leaving their brains to this department when they die, please contact us. Intending benefactors may rest assured that any contributions, however small, will be gratefully received." Reported in *Insider's Newsletter.*

The Management of Injures of the Eye: General Principles, Special Practices

GEORGE M. HAIK, M.D., and
GEORGE S. ELLIS, M.D.
New Orleans, Louisiana

The treatment of eye injuries is best left to the ophthalmologist, writes the author. In the first place, every injury of the eye is potentially serious, and in the second place, the primary operation in ocular trauma is almost always the definitive operation, he explains. He considers types of eye injuries and what the physician untrained in ophthalmology should do for such patients.

GENERALIZATIONS ARE admittedly dangerous, but few exceptions can be taken to the statement that the definitive treatment of injuries of the eye is a task for the ophthalomologist, not for the physician who is not trained in ophthalmology. In the year 1960 and in the United States of America, there are few occasions on which this policy cannot be followed.

TWO CHIEF REASONS

It is a policy which is both wise and safe for two chief reasons:

1. Every injury of the eye is potentially serious. Even the most trivial-seeming may lead to complete blindness. In injuries of the eye, things are frequently not what they seem. Superficial, apparently minor, damage may be the only visible evidence of exceedingly serious damage to the deeper structures, damage that can be demonstrated only by the use of specialized diagnostic equipment by specialized personnel. It is also possible that superficial damage, or even damage not immediately evident, may set up a chain of consequences that will lead to partial or complete loss of vision.

2. The primary operation in ocular trauma is almost always the definitive operation. This is not the kind of surgery in which there are many second chances. It is most emphatically the kind in which great harm may be done by incorrect treatment or by ill-advised manipulations in which surgical trauma is added to the original trauma.

On the other hand, one must be realistic. A trained ophthalmologist is not always immediately available when the injury occurs. A physician who is not an ophthalmologist must often take the first steps. What should he do? What should he not do?

CARDINAL PRINCIPLES

The physician who is not trained in ophthalmology should guide himself by two cardinal principles:

1. He should limit himself to the procedures which are indicated by the circumstances and should do nothing else.

2. He should refrain from doing further harm to the already damaged eye, either by the way he performs the necessary procedures or by the performance of procedures which are not necessary.

In particular, no matter what the injured eye may look like, no matter how disintegrated and utterly beyond hope it may seem, it should never —and I use the word *never* advisedly—be enucleated when the patient is first seen. On first inspection, even a trained ophthalmologist may find it hard to evaluate ocular damage. If the injury is bilateral, the eye which shows no vision immediately after injury may later show light perception or better. Also it may eventually prove to have better vision than the other eye.

If enucleation should finally prove necessary, this is a decision to be made later, with due de-

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Read before the Section on Eye, Ear, Nose, Throat, 92nd Annual Session, Mississippi State Medical Association, Jackson, May 10-12, 1960.

liberation, by a trained ophthalmologist. Wartime experiences removed whatever excuse there might once have been for panic enucleation for two reasons:

1. It showed that infection can be prevented, or aborted if it is already present, by modern chemotherapeutic and antibiotic agents.

2. It showed that the risk of sympathetic ophthalmia is by no means as great as it was once thought to be. Much about this complication still remains to be elucidated, but enough is now known about it to eliminate much of the fear formerly associated with it. With few exceptions, any injured eye which seems inevitably destined for blindness should be removed within 14 days after injury, but wartime experience showed that it is perfectly safe to permit it to remain in situ for this period. Meantime, constant vigilance, supplemented by the routine use of the slit lamp, will save many an eye that might otherwise have been sacrificed needlessly.

DIAGNOSIS AND EVALUATION

The correct examination of an injured eye requires gentle separation of the lids. If the untrained physician feels it essential to proceed with such an examination, he should avoid instrumentation and limit retraction to the use of sutures which can be inserted in the lids with the injection of a local anesthetic. He must bear in mind that pressure on the eyeballs must be avoided at all costs, that all manipulations must be exceedingly gentle, and that probing is never warranted or permissible.

Results of Violation

Violation of these precautions means, if a perforating wound is present, that loss of vitreous will almost inevitably occur. It is also entirely possible for the physician who is not an ophthalmologist to mistake prolapsed iris or bloody vitreous for a foreign body and to remove it, or to attempt to remove it, with disastrous results.

Fundamental Observations

My own feeling is that so much harm can be caused by an incompetent examination, and so little information gained by it useful to a physician who is untrained to take further action, that it would be better for him to forego it altogether and limit his investigation to a few fundamental observations, as follows:

1. The history of the injury should always be secured if the patient is conscious. It is likely to be unreliable in military practice and in mass disasters, but in civilian practice one can frequently obtain from it such useful data as the circumstances of the injury, the force and direction of the blow or wound, and, if a foreign body is involved, its nature and the possible risk of infection from it.

2. If one eye is injured, a possible injury should always be suspected in the other.

3. A possible injury of the eye should always be suspected in a head injury, particularly if the patient is unconscious. In the Korean War, because it was estimated that more than a third of all head injuries were associated with ocular injuries, the recommendation was made that ophthalmologists should be attached to all neurosurgical teams working in forward areas.

4. Even in military practice it is desirable, when practical, to record the initial vision after injury. In civilian practice, this is essential. The information serves as a yardstick of progress or regression. Moreover, in civilian and industrial practice it may forestall serious medicolegal consequences or may, on the other hand, help the patient to secure the compensation which is his due but which, in the absence of this information, he might not otherwise receive.

EMERGENCY MEASURES

The physician, who is not an ophthalmologist, when called upon to manage injuries of the eye, would do well to confine his activities to measures (1) designed to counteract the effects of the initial trauma, (2) designed to prevent further trauma, and (3) planned to keep the victim in the status quo or to render him transportable to a medical installation in which services of an ophthalmologist are available. I firmly believe that if this policy of abstinence from positive action were followed in civilian and industrial practice, one result would be a great reduction in the amounts now paid out in compensation for ocular injuries. In an incalculable number of instances, the amounts are greatly increased by bad initial management.

Practical Application

The practical application of this policy means that the physician who is not an ophthalmologist should limit himself to the following measures:

1. Superficial foreign bodies and other debris should be removed, whenever practical, by irrigation with physiologic salt solution or simple tap water. Irrigation is imperative in chemical injuries, as I shall point out later. If the means of irrigation are not at hand, superficial foreign material can be removed from the eye by the gentle application of a moistened cotton applicator.

2. If the patient is unconscious and cannot close his eyes, a suture should be placed through the skin of the upper lid, which can then be drawn down and held in position by anchoring the free ends of the suture on the cheek with adhesive. If the upper lid has been destroyed, the procedure can be reversed.

3. It is usually best to bandage both eyes. Whether a monocular or binocular bandage is used, it should be applied with enough firmness to hold the upper lid securely in place and thus prevent blinking.

Transporting of Patient

Once these simple measures have been instituted, the patient has been protected against further ocular trauma and can be safely transported to a point at which he can receive proper care. Ideally, all patients with ocular injuries should be transported recumbent, and the military practice can well be employed of keeping them on the litters on which they have been placed originally until the character and extent of their injuries have been determined. Intraocular hemorrhage and loss of vitreous are risks in all injuries of the eye, and they are multiplied many times by careless handling of the patient or by not warning him against voluntary movement. The fact that the risks are, generally speaking, less in the nonexplosive injuries of civilian life than in military practice does not excuse, or compensate for, the general disregard of this simple precaution.

Conjunctival Flaps

I am afraid that I cannot go along with the assumption, sometimes made by even experienced ophthalmologists and frequently found in manuals of disaster management, that the formulation of protective conjunctival flaps is so simple a procedure that anyone with an elementary knowledge of surgical principles can create them. These flaps, which are obtained by undermining the conjunctiva and which are then sutured over the eyeball, have undoubtedly saved many eyes which might otherwise have been lost, but at that, their creation is by no means as simple as it sounds.

A far simpler protection than the usual dissected conjunctival flap is the fornix flap, which was developed in the eye center of the 64th General Hospital in Italy during World War II. It was suggested, as so often happens, by the chance observation of an anatomic fact whose significance had not previously been realized: When the upper and lower eyelids were retracted by lid sutures and the conjunctiva of the fornices was thus fully visualized, it was observed that when it was folded upon itself, it has a leeway of some 4-6 mm. It is therefore a perfectly simple matter to draw the conjunctiva of either the upper or lower fornix over a damaged globe and equally simple to suture it in that position. A fornix flap thus serves the same purpose as a dissected flap, but is easier and faster to create, and the procedure is entirely lacking in the trauma inherent in the creation and application of a dissected conjunctival flap, especially in inexperienced hands.

I should deprecate the promiscuous use of even the fornix flap by physicians who are not ophthalmologically trained, but its use in occasional selected cases might conceivably be justified in mass disasters or even ordinary civilian accidents to permit the patient with an injured eye to be transported, without further risk to it, to a place in which specialized care could be procured. That is as far as I would go, however, in recommending surgery on the eye by physicians not trained in this field.

ADJUNCT THERAPY

Patients with wounds limited to the eye are unlikely to have sustained any degree of shock. Hemorrhage, while it may occur, is seldom of significance except from the standpoint of the eye itself. Once the first aid measures just outlined have been performed, therefore, there is no contraindication to immediate transportation. A patient in shock from other injuries must, of course, be resuscitated before he can be moved, and he may have wounds of such a character that he cannot be transported at all. In this type of case, damage to the eye becomes of minor consequence, however serious it may be.

Tetanus antitoxin should be administered in appropriate cases, which include those in which the source of the wound is unknown or the conditions of wounding are such that there is risk of this type of infection. If a positive story of previous immunization can be obtained, a booster dose of toxoid is substituted for antitoxin. Now that tetanus immunization in childhood is becoming general, some delay to secure the facts is probably justified in most civilian cases. In military practice, immunization is now routine.

Some antibiotic, preferably penicillin, should also be used systemically when the circumstances seem to warrant it. It is particularly important, if there is likely to be delay in complete examination and definitive treatment, that the antibiotic be given promptly and be administered at regular intervals. The circumstances of mass disaster are unlikely to warrant refinements in the use of other

antibiotics or combinations of chemotherapeutic and antibiotic agents, but these are permissible in civilian life when they seem to be indicated.

The local use of antibiotic agents and anesthetic agents by untrained personnel is not wise, particularly if a perforating injury is suspected. The patient's reaction cannot be employed as a guide. In a surprising number of ocular injuries the pain is slight, and the patient may even be unaware that he has been hurt.

Atropine puts the iris and ciliary body at rest and discourages the formation of anterior synechiae. Its use is therefore justified, though it should be used with discretion.

Finally, a patient with both eyes bandaged is likely to be nervous and apprehensive, and is also likely to be restless. The administration of some sedative drug is therefore usually a wise precaution.

SPECIAL TYPES OF OCULAR INJURIES

I began this paper by saying that injuries of the eye should seldom be treated definitively except by a trained ophthalmologist. But you will remember that I added that this was a perfectly feasible stipulation in the United States in the year 1960. I hold to that statement even when, in the interests of realism, I say that occasionally in ordinary civilian practice, and certainly in the event of the possible mass disaster to which today we cannot close our eyes, these injuries must sometimes be managed by physicians without special training in ophthalmology. The following remarks are intended to cover the initial management of ocular trauma in those special circumstances.

Injuries of the eye may be roughly classified into the following groups:

1. Injuries of the eyelids.
2. Contusions and concussions of the eyes and their adnexa, sometimes associated with fractures.
3. Abrasions of the cornea.
4. Lacerations of the eyes and adnexa, sometimes associated with fractures or with perforations of the cornea and sclera.
5. Retained foreign bodies, which may be superficial or intraocular.
6. Chemical, radiation, and thermal burns.

INJURIES TO THE EYELIDS

Lacerations of the eyelids often give rise to an alarming picture because of the swelling and ecchymosis that develop so promptly and become so extensive. They constitute a type of injury which must be repaired by a general surgeon if an ophthalmic surgeon is not available within a maximum of 36 hours. If repair were deferred longer, fibrosis of the contracted muscles would occur and approximation of the tissues might no longer be possible. Injuries of the eyes must always be excluded before surgery is undertaken.

Horizontal lacerations of the eyelids, unless there is great distraction and loss of tissue, are usually easy to handle. The injuries are parallel to the direction of the orbicularis fibers and there is no tendency to gaping. As a result, closure usually involves no more than simple suture.

Vertical lacerations, on the contrary, involve far more than simply bringing together severed tissues. If repair is not accurate, healing will be faulty, and the result will be not only undesirable cosmetic defects but, even more important, functional disturbances. The chief objects of operation are (1) to accomplish perfect apposition of the lid margins, so that notch-formation will not occur, (2) to increase the raw area in the substance of the lid itself, in order to create a broader adhesion, and (3) to overcorrect avulsion of the lid, in order to ensure approximation and restore the level. The halving operation devised by Wheeler is the most generally useful technique in injuries of the eyelids, but it is a specialized procedure scarcely likely to be known to a physician not trained in ophthalmology.

CONTUSIONS AND CONCUSSIONS

Contusions and concussions of the eyes and their adnexa form a most deceptive group of injuries. They may range from a slight contusion, which needs no special treatment and from which recovery is rapid, to rupture of the globe which may terminate in complete loss of vision. A minimal initial injury may be followed by blindness because of such complications as enophthalmitis, uveitis with sympathetic ophthalmia, secondary glaucoma, and retinal detachment. On the other hand, such consequences may immediately follow the injury as perforation of the globe with prolapse of the intraocular contents, intraocular hemorrhage, cataract-formation, rupture of the choroid, avulsion of the optic nerve, and retinal detachment, which may be an immediate as well as a delayed consequence.

It is sometimes a difficult matter to persuade patients that all of these injuries are potentially very serious, particularly when any degree of intraocular hemorrhage is present. Complete bed rest in the hospital for 10 to 14 days is the only advice that can be justified, and if it is not accepted, the possible consequences should be stated in blunt terms.

Parents of young children are especially hard to convince. I have seen more than one enucleation that would not have been necessary if an apparently trivial contusion had been treated correctly, and I will not settle for any routine other than hospitalization and complete bed rest for this kind of injury.

The eyes are completely occluded for a week. Then pinhole goggles are used. Frequent field of vision studies are made. In many instances they show great fluctuations in the size and shape of the scotomas present before the final results are evident. Specific complications which develop, such as iritis or glaucoma, are treated by standard methods.

ABRASIONS OF THE CORNEA

Most corneal abrasions heal promptly. The corneal surface may lose most of its epithelium as the result of even a trivial injury, but re-epithelization usually occurs within 24 hours. The proper management is instillation of an antibiotic agent and the application of a pressure dressing.

LACERATIONS OF THE EYES AND ADNEXA

The management of lacerations of the eyes depend upon their location. Small lacerations of the conjunctiva may heal by natural processes. Lacerations of the cornea require suture. In a laceration that involves the eyeball the possibility of a retained intraocular foreign body must always be considered. No matter how strong the suspicion, the physician must hold his hand, applying only the simplest first aid measures and seeing to it that the patient is removed as promptly as possible to a hospital in which diagnostic facilities and skilled personnel are available. Any attempt at manipulation will simply cause more extensive herniation of the bulbar contents. In the interim, the best interests of the patient are served by disturbing the eye as little as possible for inspections, changes of dressing, and topical applications.

RETAINED FOREIGN BODIES

What the untrained physician should do when he encounters a foreign body within the eye depends upon where it lies. The relative and frequent deceptive ease with which foreign bodies free in the eye or lying superficially on the cornea can be removed must not lead untrained personnel into attempts at more complicated maneuvers. At best, the results of management of intraocular foreign bodies are not outstanding. They will be improved if the physician untrained in ophthalmology does no more than the circumstances demand and leaves definitive management entirely to trained ophthalmologists. It is not even necessary for the physician who first sees the patient to arrive at any diagnostic conclusions. Localization requires the use of special equipment and special techniques. Like surgery, it is the function of the ophthalmologist. Moreover, the removal of an intraocular foreign body is never a real emergency. The object must be removed before it becomes embedded in the tissues, it is true, but that does not occur until some time after injury.

Conjunctival foreign bodies can usually be removed, as already mentioned, by the gentle application of a cotton swab. Anesthesia is not necessary, but good illumination and adequate magnification are essential. Removal of an object from the epithelial layer of the cornea and Bowman's membrane is also usually fairly simple. If the object is corneal, it can be floated off by irrigation or removed with a sharp foreign body spud or a pointed hypodermic needle. If an iron foreign body has been in the eye more than 12 hours, a rust ring is almost invariably present, and as much as possible of it should be removed by persistent gently scraping with a sharp spud or with a needle. If multiple particles are present, as many as possible should be removed, even if denudation of the entire corneal epithelium is necessary. Corneal regeneration, without scarring, occurs rapidly.

If the foreign body is large, improvised equipment may serve the purpose if nothing else is available. If the body is minute, a loupe or the slit microscope may be required and the case is obviously not one for the untrained physician. Extremely small particles can be demonstrated by staining the corneal tissues with fluorescein or mercurochrome.

Results of the removal of superficial intracorneal foreign bodies are generally good. An object which has penetrated the substantia propria is bound to produce scarring, but whether vision is affected depends upon the location of the scar. A central scar is likely to cause considerable interference with vision, while a peripheral scar may produce none at all.

BURNS

Casualties burned in a possible mass disaster are unlikely to present immediate problems referable to the eyes. Those close enough to an atomic or thermonuclear explosion to suffer ocular injuries will probably not survive. If they do, they will develop irradiation cataracts, which are a delayed problem and are managed by ordinary techniques of civilian practice.

Flame or flaming gasoline has frequently lethal effects upon the body but usually does no great damage to the eyes, because of the speed of the winking reflex. In the absence of objective evidence of damage, it is unlikely that any injury has been sustained, though this fact does not eliminate the obligation of a careful examination.

If there is visible evidence of injury, an antibiotic ointment may be applied, after which the eye is closed under a patch or is covered with massive sterile dressings applied with firm pressure over petrolatum-impregnated gauze. Perforated contact lenses are difficult to insert, and in the hands of untrained personnel attempts to introduce them may cause harm.

Cornea Involvement

If the cornea is involved in a burn, the topical use of cortisone reduces the chances of secondary iritis and scarring and causes no appreciable delay in healing. In severe cases with ectropion the ophthalmologist who sees the patient may need to use skin grafts, and even corneal transplantation may be required.

A new hazard of modern life is the careless use of intensive ultraviolet lamps as well as infrared light in the home. The resulting edema, photophobia, and pain may cause great discomfort, but the damage is seldom permanent. Treatment consists of bed rest in a darkened room and the use of ice compresses while the patient is kept comfortable by whatever means may be indicated in the special case. The use of a topical anesthetic agent is sometimes helpful.

Chemical Burns

Hughes' classification of chemical burns of the eye into nonprogressive and progressive categories is excellent:

1. Nonprogressive burns are caused by acids, with the exception of hydrofluoric and sulfurous acids and acids containing heavy metals. The effect of acids may be extremely destructive, but it is immediate.

2. Progressive burns are caused by the acids just listed, by alkalis such as lime and ammonia, and by vesicant war gases. The effect of alkalis, while at first it may seem slight, may be extremely serious.

Another category of chemical burns should be mentioned—irritant burns caused by lacrimators such as chloracetophenone.

The incidence of chemical burns of the eye has been greatly increased by the widespread modern industrial use of metallic and nonmetallic salts. The extent of the damage in both progressive and nonprogressive burns depends upon the particular causative agent, its concentration and penetrability, and the duration of the contact. Lime is particularly dangerous, whether slaked or unslaked. The substances in which it is used, plaster, mortar, and cement, are not soluble in water. As a result, particles tend to become embedded in the conjunctiva and other ocular structures, where they may continue their searing and burning effect for many hours.

Chemical burns constitute a type of ocular injury in which immediate treatment is demanded, even if only lay personnel are at hand to apply it. The patient's first tendency is to close his eyes spasmodically. His second is to rub them. Both tendencies must be combated.

The first principle of management is immediate, copious irrigation, while the eyelids are held open with as much strength as is necessary to permit the water to reach all portions of the eye. The specially built foot-operated irrigating machines available at strategic locations in many modern industrial organizations are not necessary to accomplish the required results. A syringe or a soft rubber tube is equally effective, and, in an emergency, the patient's head can be held under a faucet while a gentle stream of water is directed upon the injured eye. Simple solvents require irrigation for 10 minutes or a little more. Strong alkalis and acids require a minimum of 30 minutes and preferably more.

It was formerly thought that the proper way to treat chemical burns of the eye was by the use of appropriate neutralizing solutions. Even those who still cling to this concept now agree that their use is warranted only after simple, thorough irrigation with water.

An attempt to dig particles out of the cornea is usually contraindicated except when lime or lime derivatives and compounds are responsible for the injury. Then particles that are grossly visible may be removed with a cotton applicator. The risk of trauma is warranted because of the greater risk of progressive damage by lime.

Except for the treatment of burns by lewisite and certain other vesicant war gases with BAL (Dimercaprol), no specific treatment of chemical burns has proved to be of any value. The early successes reported with hydrosulphosol have not been duplicated, either experimentally or clinically, by later observers. The continued use of local anesthetics is harmful.

After irrigation, the following steps should be undertaken:

1. Conditions should be provided that are favorable to reparative processes.

2. An antibiotic should be instilled locally, to prevent secondary infection.

3. A lubricant ointment or oil is applied, to prevent the denuded surfaces from sticking together.

4. Cortisone or hydrocortisone is applied locally to alter the inflammatory reaction.

SUMMARY

Injuries of the eye are likely to become the responsibility of the physician untrained in ophthalmology in only three circumstances: (1) in mass disasters, (2) in industrial accidents, and (3) in accidents in rural and other communities in which there is no practicing ophthalmologist and none within easy reach.

The untrained physician who finds himself in such a situation should be guided by certain concepts, of which the most important are (1) that any injury of the eye is potentially serious, and (2) that any mistake in management is potentially disastrous.

Unless there are clearcut indications for some other course, the physician without training in ophthalmology should confine his activities to simple first aid measures designed (1) to counteract the effects of initial trauma, (2) to prevent further trauma, and (3) to render the patient transportable to a location in which diagnostic facilities and trained personnel are available.

Measures to implement these principles are outlined, and certain types of injuries are briefly discussed. Injuries of the eyelids and chemical burns require prompt treatment. Superficial foreign bodies on the conjunctiva and cornea may be removed with the proper precautions. Contusions and concussions require only expectant measures. Extensive lacerations and retained intraocular foreign bodies require both skill and judgment, and their definitive management must not be attempted by physicians not trained in ophthalmology. ★★★

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BURN RIDDLE HAS NEW ANSWER

Newest answer to the burn riddle is milk. A British physician, Dr. Frederick Willington of Devon discovered the healing properties of the common liquid when a woman patient accidentally scalded herself severely and plunged her injured hand in the nearest cold fluid—a pitcher of milk. She kept it there for about half an hour and subsequently suffered no blisters and only a slight reddening.

According to *Insider's Newsletter,* Dr. Willington tested the remedy in over 200 burn victims. In all cases it proved effective for both first- and second-degree burns—provided it was used immediately and compresses of cold milk kept over the burn for the first 24 hours.

Medical explanation: Cold moisture of any kind reduces heat caused by burn, and alleviates pain. Milk's colloidal quality makes it adhere to flesh without pressure, and it contains protein similar to that in human tissue.

Autoerythrocyte Sensitization: A Review and Case Report

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Although a number of cases of autoerythrocyte sensitization have been presented in medical literature, no improvement in therapy has yet been found. The syndrome is characterized by an abnormal tissue response to extravasated red blood cells. The literature is reviewed and a case discussed.

In the July 1955, issue of *Blood,* the Journal of Hematology, Gardner and Diamond discussed a syndrome characterized by an abnormal tissue response to extravasated red blood cells. The four cases in their series had similar histories. All were women and all had an episode of precipitating trauma followed by a severe local tissue reaction with intense pain, swelling, and extension of bruising into adjacent areas. In two patients, spontaneous ecchymoses developed in remote body areas. There were also reported gastrointestinal, genitourinary, and intracranial hemorrhage in two cases.

COAGULATION MECHANISMS INTACT

Extensive hematologic investigation was carried out in these patients and it was found that the coagulation mechanism was intact in each case. It was then determined that the symptoms could be duplicated by intradermal injection of the patient's whole blood. The antigenic agent was further isolated and found to exist in the red cell stroma. From their investigations, Gardner and Diamond assumed that a fixed tissue antibody reacted with red cell stroma to produce edema, increased capillary permeability, and local extension of the hematoma.

It was their feeling that limitation of the process locally was dependent upon dilution of the extravasated blood by edema fluid to a point where antigen concentration fell below the level required to elicit the reaction. No really definite explanation was offered for the spontaneous bruises which occurred in other parts of the body. However, it was felt that possibly there was a generalized increase in capillary permeability. No satisfactory therapy was found for this condition, although a number of approaches were used including splenectomy, cortisone, and desensitization with red cells, whole blood, and red cell stroma. All four of the cases in this original series showed gradual improvement over a period of years.[1]

In addition to the original report by Gardner and Diamond, there have been several subsequent cases of this condition in the literature. The general clinical features of all the reported cases are nearly identical, and no improvement in therapy has been found.[2, 3, 4]

CASE REPORT

E. L. L., a white female of 50 years, was admitted to the hospital on Mar. 29, 1959. Approximately one hour prior to this admission the patient had bumped her head on the dash of an automobile when the brakes were suddenly applied. Immediately after the accident she experienced no ill effects with the exception of a small, slightly painful bruise above the right eye. Approximately 30 minutes subsequent to injury she became aware of a tingling sensation around her mouth and down the left side of her body. She then noted weakness in her left extremities and had nausea and vomiting.

Read before the Delta Medical Society, Cleveland, April 13, 1960.

The family history was negative. Past history revealed that she had been seen by a neurosurgeon in 1932 because of severe headaches. About 1940 the patient had had a number of spontaneous bruises of her lower extremities and a diagnosis of purpura simplex was made. Within the past five or six years no tendency toward easy bruising had been noted. Systems review was negative. Physical examination on admission to the hospital revealed a small hematoma above the right eye. The patient was conscious, alert, and well oriented. Ophthalmoscopic examination was normal, and the neck was not stiff. The cranial nerves were intact. Motor power on the right side was normal. There was decided weakness of the left upper extremity and even more pronounced weakness of the left lower extremity. Tendon reflexes were all present and equal. Babinski reflexes were negative. Sensory examination revealed a slight but definite hypesthesia involving the left side of the body. Routine laboratory examinations were all normal. Bleeding and clotting times were normal. Skull x-rays were negative. The patient seemed to be getting along quite well, although she continued to complain of some nausea and weakness and developed a persistent right frontal headache. On the afternoon of the fourth hospital day the patient experienced severe nausea and vomiting and her blood pressure dropped to shock levels. At the same time, however, the pulse rate remained slow. As soon as the shock was controlled, a spinal tap was done. Pressure was normal, fluid clear and chemistry normal.

On May 3, 1959, the patient continued having symptoms and findings which seemed out of proportion to her obvious injury and was transferred to a Memphis, Tenn., hospital under the care of Dr. Robert Raskind, a neurosurgeon.

Examination by Dr. Raskind revealed essentially the findings recorded above. A repeat spinal tap was normal, as were skull x-rays. During the next 15 days the patient seemed to be recovering satisfactorily. However, she then suddenly complained of severe headache and her condition rapidly deteriorated. Consequently, carotid arteriography and pneumoencephalography were done and both were normal. After a period of further observation and treatment, Dr. Raskind discharged the patient on Apr. 26, 1959, with diagnoses of (1) concussion and possible contusion of brain, (2) cerebral thrombosis, (3) hemiparesis, left.

For the next three month period the patient remained at home. During this time her hemiparesis disappeared, but she continued having headaches, malaise, generalized weakness, and nausea. She also complained of dizziness for which no effective remedy could be found.

On July 30, 1959, four months after injury, the patient was again admitted to the hospital. At this time she gave a history of having had violent right frontal headaches along with nausea and vomiting for several days. Twelve hours after admission there appeared spontaneously a large bruise above the right eye. At this time the patient ran a low grade fever for several days and complained of epigastric and left upper quadrant discomfort. Physical examination revealed nothing of note except the above mentioned bruise. Laboratory studies including bleeding time, clotting time, C.B.C., B.S.P., febrile agglutinations, glucose tolerance, urinalysis, blood electrolyte determinations, and 17 ketosteroids were normal. An electrocardiogram was normal, as were chest and upper gastrointestinal x-rays. The patient remained in the hospital for two weeks and during this time developed another painful, spontaneous ecchymosis of the right forehead.

In the latter part of August, 1959, the patient was returned to Dr. Raskind, who in turn referred her to Dr. Gerald I. Plitman for hematologic consultation. The patient was again hospitalized in Memphis and studies were done comprising bleeding time, platelet count, tourniquet test, cold blood clotting time by two tube method, prothrombin time, and partial thromboplastin time. All these tests were normal. Dr. Plitman then skin tested the patient with .05 cc. of her blood intradermally on the forearm. Within 30 minutes there was an edematous reaction and over the next several days an area of swelling and redness the size of a lemon appeared. When the lesion began to subside, spontaneous petechiae appeared in the involved area.[5]

Since August, 1959, the patient has had numerous painful hematomas of the right forehead and lower extremities without trauma. On Jan. 15, 1960, she reported constant hiccups of three weeks' duration. Hospital admission was advised but the patient declined. She was treated with several drugs without benefit. However, after about six days her hiccups ceased.

At the present this lady is feeling only fairly well. She still has frequent headaches, is weak, and states she has hiccups several days each week.

In summary, this 50-year-old lady suffered a relatively mild head trauma in an automobile accident. Subsequently she has had numerous episodes of spontaneous, painful bruises. She has also had a left hemiparesis and unexplained hiccups. She has been found to have a positive reaction to intradermal injection of her own blood, and is believed to represent a case of autoerythrocyte sensitization. ★★★

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Clinicopathological Conference IX

Conducted by the Department of Pathology
Mississippi Baptist Hospital
Jackson, Mississippi

A 45-year-old white female with a complaint of "tumor of the left shoulder" is the subject of CPC IX. For two years prior to discovery of the "tumor" she had suffered from what was considered arthritic pains of both knees, fingers, hands, and elbows, and pain in the left shoulder. X-rays prior to hospital admission showed a bony tumor arising from the vertebral border of the scapula near its upper end. Participants in the discussion are Drs. George Purvis, James M. Packer, and Kenneth M. Heard.

THIS 45-YEAR-OLD MARRIED white female entered the hospital because of "tumor of the left shoulder." During the winter of 1958 and 1959 the patient had what was considered arthritic pains of both knees with similar pains in the fingers, hands, and elbows. This improved during the summer months. During the winter of 1959 and 1960 she developed pain in her left shoulder. This pain was localized near the shoulder blade and was not present all of the time. At times it was of burning character. Occasionally motion of the shoulder made this worse. Recently there had been rather marked swelling in the soft tissue adjacent to the scapula.

X-rays taken prior to admission to the hospital showed the presence of a bony tumor arising from the vertebral border of the scapula near its upper end. This was in the shape of a mushroom with a pedicle attached to the scapula, the pedicle appearing as perfectly normal bone. This base was estimated to be about 1 cm. in diameter. As the lesion widened out to about 5 cm. in diameter, a marked sclerosis was noted with slight scalloping of the most peripheral margin from the pedicle. Slight mottling was seen within the sclerotic density. There was no calcification within the soft tissue about this tumor. It was stated that on the oblique films the outline of a soft tissue mass related to this bony lesion could be seen. Past and family histories were unremarkable.

PHYSICAL EXAMINATION

The eyes, ears, mouth, neck, breast, and axilla were negative. On examination of the chest a soft tissue mass was noted medial to the left scapula which extended almost the entire length of the scapula and apparently moved with it. The skin was of normal color over the tumor and did not appear to be disturbed in any way by it, except for the bulge. Lungs were normal to percussion and auscultation. The heart was normal. The abdomen was negative and extremities negative.

Admission laboratory work revealed a hemoglobin of 10 gm. with hematocrit of 33 vol. per cent. The sedimentation rate corrected was 23 mm. per hour. Total white count was 11,700 with 73 per cent segmented neutrophils, 20 per cent lymphocytes, and 7 per cent monocytes. The urinalysis was essentially negative. On May 20, 1960, an operation was performed.

CLINICAL DISCUSSION

Dr. George Purvis: "When something is so obvious, I always get 'leery' about it; so I wasn't too anxious to discuss this case. This almost sounds like an orthopedic protocol. It is so brief and says so little that I don't find very much in here that is of too much importance.

"This is a 45-year-old white female who came into the hospital with a chief complaint of 'tumor of the left shoulder.' In the past history the only thing that we have to go on is that two years previously she had some 'arthritic pains' in her fingers, hands and elbows. There was some improvement during the summer months and during the winter of 1959 and 1960. She had had pain in her left shoulder localized near the shoulder blade which was not present all the time. It was of a burning character occasionally, and was made

worse by motion of the shoulder. Recently, and I don't know how long a period of time that was, there had been rather marked swelling in the soft tissues adjacent to the scapula. Examination locally revealed a soft tissue mass medial to the left

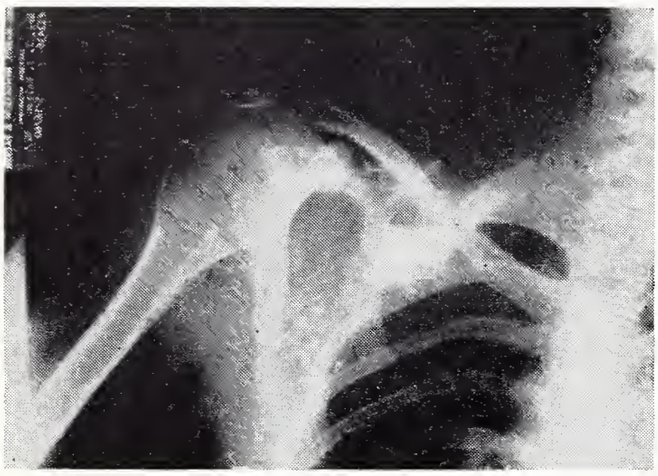

Figure 1. X-ray showing sclerotic bony mass attached to vertebral border of left scapula.

scapula, extending almost the entire length of the scapula and apparently moving with it. The skin was normal in color and did not appear to be disturbed in any way. The remainder of the physical examination was essentially negative. Laboratory studies indicated a mild anemia.

"Primarily we are confronted with a 45-year-old white female with a tumefaction which you can see on x-ray. I have tried to find out a little bit more about the physical examination, but the surgeon isn't here today. Therefore we still don't have much in way of description of the gross findings of the shoulder itself.

"On x-ray (Fig. 1) we notice a mass presenting in this area in relation to the scapula. Apparently it is localized near the vertebral border of the scapula. It is a pedunculated mass which appears to have a good stalk attaching it to the scapula itself. The base has the appearance of being normal bone of similar character to that of the scapula. The cauliflower-like or large part extending out from the base has a rather peculiar character about it. This is denser in consistency than is the base, and the x-ray does not appear to penetrate it as well as it does the bone which is connected to the scapula.

"I am at a loss to present very many things in the way of differential diagnosis on this. Given a pedunculated mass arising from bone, ordinarily I think of an exostosis or osteochondroma. This is from one of the flat bones, but this bone is also formed from ossification centers. So, I would assume that this is some type of osteochrondromatous lesion. It appears to me that the enlarged cap here is cartilage with calcification in the cartilage itself. The scalloped looking border still appears to be fairly well demarcated. It does not have the appearance of calcification extending out into the soft tissue itself. It might be thought that there is a soft tissue shadow. I'm not at all sure whether this is an enlarged soft tissue shadow or just the appearance of the projection because this is a distorted view in an attempt to profile the scapula. We interpreted this as representing some soft tissue swelling."

Dr. James M. Packer: "I thought there was soft tissue swelling in that area."

Dr. Purvis: "I certainly think that it could be. On the other hand, it seems to me that it could be muscular normal soft tissue shadow and does not necessarily indicate abnormal tumor or abnormal soft tissue swelling. We are told in the protocol that clinically during the examination there seemed to be some soft tissue swelling."

Dr. Kenneth M. Heard: "We had difficulty getting measurements on this. The surgeon was out of town when the protocol was written. Dr. Packer, could you give us some idea on this?"

Dr. Packer: "It was 10 or 12 cm. in maximum dimension, and probably 3 or 4 cm. in depth. As far as I could tell from questioning her husband, it had only been prominent for the last three or four weeks."

Dr. Purvis: "My first impression of the thing is that we have an osteochondroma in a place in which it is subjected to pressure because of the scapula riding over the rib cage. I feel that it is a benign lesion. It would have to be a very malig-

Figure 2. Osteochondroma with large bursa attached. Note papillary projections in lining of sac.

nant lesion to produce such rapid soft tissue swelling. Therefore, I am more inclined to believe that this is an osteochondroma with an enlarged soft tissue bursa and with calcification in the cartilaginous cap. The second thing in the differential would be a rapidly growing chondromyxosarcoma. I am excluding the usual type of chondrosarcoma which arises in the cap of an osteochondroma because characteristically it is a slowly growing lesion. A chondromyxosarcoma is a rapidly growing, very malignant lesion. I believe in this case the lesion is benign and that the soft tissue tumefaction represents a large bursa in the presence of repeated trauma."

Dr. Purvis's Diagnosis: Osteochondroma of scapula with swelling due to pressure-type bursa.

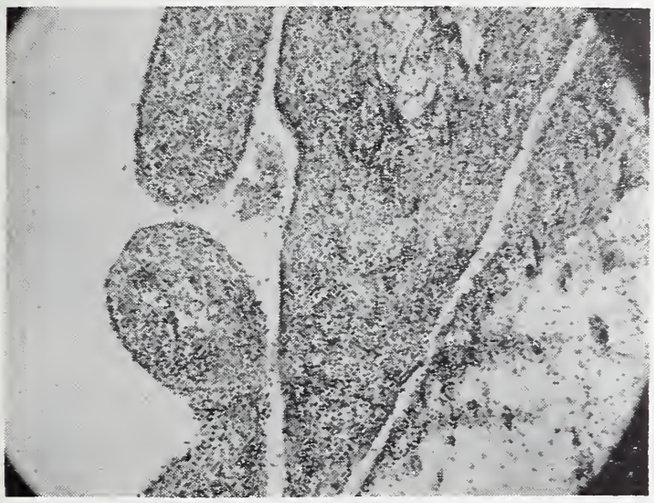

Figure 3. Lining of bursa. Note papillary structure and chronic inflammation.

PATHOLOGICAL DISCUSSION

Dr. Heard: "The lesion removed at surgery presented as a sac-like structure measuring 13 x 15 cm. attached around the base of a rather typical osteochondroma (Fig. 2). This was interpreted grossly and microscopically as an adventitious bursa. Sections of the wall of the bursa showed a rather marked bursitis, as one might expect (Fig. 3). I was particularly fascinated by the extreme size of the bursa, which is undoubtedly due to the constant trauma and motion of this site."

Pathological Diagnosis: Osteochondroma with massive adventitious bursa (exostosis bursata).

★★★

1190 North State Street

"UNMENTIONABLES" MAKE TV DEBUT

TV will get more and more into the medical field this fall as "unmentionables" once reserved for the doctor's office and the psychoanalyst's couch become the subjects of daytime dramas.

One new series designed for women will begin in November. A few of its scheduled subjects: frigidity in women, religious intermarriage, disenchanted housewives, the unmarried girl and her problems, and menopause. Yet untitled, the series will be documentations of actual cases presented in dramatic form. NBC news commentator Pauline Frederick will be narrator.

Also aimed at the harassed housewife, ABC-TV's new series "Road to Reality" makes its debut October 10. Each program will be a dramatization of actual group therapy sessions, where troubled persons talk out their problems under the supervision of a psychotherapist.

"The Turning Point," a similar program now in production, is also based on real psychiatric cases. Produced under the supervision of an analyst, "The Turning Point" will use material furnished by authorities in the psychiatric field.

SPECIAL ARTICLE

The Workmen's Compensation Laws As They Apply to the Hospital Patient

GEORGE D. PURVIS, M.D.
Jackson, Mississippi

THE GENERAL PRACTITIONER and almost every medical specialist at least occasionally treats employees for injuries compensable under the Mississippi workmen's compensation law as enacted in 1948 and amended in 1950, 1956, and 1958. Consequently, every physician should be familiar with its provisions. Copies of the law may be obtained from the Mississippi State Workmen's Compensation Commission in Jackson.

There are certain aspects of the law which are not generally well known and which should be emphasized. According to the law, the employer shall furnish medical, surgical, and other attendance or treatment, nurse and hospital service, medicine, crutches, artificial members, and other apparatus for such a period as the nature of the injury or the process of recovery may require. This means that freedom of physician choice by the employee is not permitted unless, as stated by the law, "he has requested the employer to furnish same and the employer shall have refused or neglected to do so or unless the nature of the injury required such treatment and services and the employer or the superintendant or foreman having knowledge of such injury shall have neglected to provide the same." Thus, the employer ordinarily has the right of choice of physician. However, when there is no time to obtain the employer's

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Chairman, Committee on Industrial Health, Mississippi State Medical Association.

Read before the Medical Staff Meeting, St. Dominic's Hospital, March, 1960.

WHAT IS WORKMEN'S COMPENSATION?

The answer to this question can be given only by the people of Mississippi through the laws they demand of their representatives. Someone must decide what is expected of such compensation in order that realistic legislation may be enacted. Is a workman to be compenstated for anything which occurs while on and/or off the job, whether induced, precipitated or aggravated by the work or not? Is the philosophy that of total health coverage? If so, legislation should be enacted that will establish this fact and not allow misunderstandings necessitating expensive, time-consuming legal proceedings.

On the other hand, if it is believed, as stated by Mississippi physicians through their House of Delegates, that the goals of workmen's compensation should be rehabilitation of the occupationally disabled with assured, prompt, and adequate indemnity at minimal cost to employers and society, then additional legislation is needed to make this clear. In general, the workmen's compensation law needs further definition, especially of "accident," "injury" and "aggravation of pre-existing conditions." It is up to Mississippi doctors to discuss this locally with labor, management and legislative members.

choice, emergency treatment can be supplied and charges paid by the employer. For most cases of workmen's compensation, semiprivate rooms are considered adequate except for the critically injured or seriously ill patient.

PHYSICIAN'S RESPONSIBILITY

It is the responsibility of the attending physician to furnish these patients full medical care, following through to complete rehabilitation and maximum productivity. The physician is also responsible for reporting medical findings and treatment promptly, concisely, and objectively. The Workmen's Compensation Commission often finds it necessary to hold hearings on certain injuries, and it is essential that the treating physician have accurate description of the time, place, manner of injury, contributing circumstances, subjective symptoms, and concise description of objective findings both on the hospital and office records.

True injury should present definite objective findings, and upon the basis of such objective findings, the physician should be able to assist in substantiating or disapproving claims for compensable injuries. Sufficient x-rays and other laboratory studies should be obtained and carefully evaluated. In the physician's busy routine, a time should be set aside for so-called "red tape." Adequate reporting of workmen's compensation injuries and their treatment, progress, and prognosis is essential to the proper administration of the law and proper protection of the individual patient.

PROPER NOTICE

The compensation cannot begin until proper notice has been given in regard to the injury. Neglect in reporting may place a severe economic burden upon the patient who urgently needs the $35 a week provided for each week of total disability if the period of disability exceeds five days. Medical history and treatment as provided by the law shall not be deemed privileged in so far as carrying out the provisions of the act is concerned. Some estimate of the expected period of temporary total disability of the worker must be made as well as whether or not permanent disability is expected in order that the insurance carrier or the self-insured employer may provide adequate reserves to care for such a compensable injury. The provision of such reports is an essential part of the treatment of patients covered by this law. If the physician does not wish to comply with this, then he should refuse to treat such patients.

Further, the physician is responsible for furnishing testimony on reasonable notice as to scientific medical findings to the end that every deserving claim receives just consideration. In cases in which hearings are held regarding workmen's compensation claims, it is customary to notify the physician well in advance, give him a definite time to appear at the hearing, and to hear him out of turn. Such periods of testimony usually last 15 to 60 minutes. During hearings a physician should limit his testimony to objective findings which he has been able to demonstrate and his professional opinion in regard to those findings. He should have his complete record of the case with him and should have reviewed it thoroughly prior to the hearing. A physician's first responsibility is to his patient. It behooves him to be scientific and objective, neither pro-employee nor pro-employer. He should present the facts pertinent to the complete rehabilitation of the employee.

COMPENSATION GOALS

Mississippi physicians through their House of Delegates have stated that workmen's compensation goals are (1) prompt rehabilitation of the occupationally disabled, (2) assured prompt and adequate indemnity for the occupationally disabled or survivors in cases where death occurs, and (3) accomplishment of these objectives at minimal cost to employers and society.

The Mississippi workmen's compensation law states that "all fees and other charges for such treatment or service shall be limited to such charges as prevail in the same community for similar treatment of injured persons of like standard of living and shall be subject to regulation by the Commission."

At treatment termination the patient must be evaluated as to permanent disability attributable to the injury. Such evaluation is based upon objective findings at the time of the physical examination. It should be performed in accord with general policies established by those interested in such evaluation. If a physician does not feel that he is capable of such evaluation or because of his close association with the patient chooses to avoid the responsibility, he may find it advisable to seek consultation or recommend evaluation by someone else.

According to the law, certain basic values are established for complete loss of specific parts of the body, and these present no particular problem as far as permanent disability evaluation is concerned. Where there is partial disability of an extremity or the body as a whole, however, then percentage evaluation of that disability is neces-

sary. This loss is figured in compensation as a percentage of the loss of the extremity or body as a whole. For instance, amputation of the leg or arm at or above the ankle or wrist shall be for the loss of the arm or leg as a whole. Compensation for two or more digits or one or more phalanges of two or more digits of the hand or foot may be proportioned to a loss of the use of the foot or hand. Loss at the shoulder joint or proximal to it is figured on percentage loss to the body as a whole, and loss of function of the back is figured as loss of percentage of the body as a whole.

RECORDS

It is important that records of exact time of return to work be kept or the exact time that the patient is instructed to return to light work. Physicians have a definite responsibility to the employer and the employee to itemize the type of work the patient can do. It is good liaison to talk with the foreman or with the employer relative to the patient or to give the patient specific notes as to what he may or may not do. It appears psychologically best for most patients to return to some type of gainful occupation as rapidly as possible. Many employers find it desirable to put patients back to doing at least some work in order to avoid loss of time from the job exceeding five days which tends to affect their insurance rate considerably. Close liaison between the physician and employer is necessary for rapid rehabilitation of the worker.

Mississippi physicians have a continuing interest in the Mississippi workmen's compensation law. Through MSMA's Committee on Industrial Health, laws of 40 states have been studied and a booklet has been prepared entitled, "Guiding Principles for Medical Aspects of Workmen's Compensation." This has been supplied each Mississippi physician by the Mississippi State Medical Association. Additional copies can be obtained through the executive office at Jackson.

COMMITTEE CONCLUSIONS

The committee has also met with similar committees from other state organizations attempting to maintain good relationships with labor and management in order to improve the present law. This is desirable from the committee's viewpoint so as to make it possible to employ the physically handicapped and produce maximum rehabilitation of the injured employee. It is the committee's opinion that the law needs further definition, especially as regards "injury," "accident," "disability," and "aggravation of pre-existing conditions."

The most favored proposal is to (1) literally restrict the present law to traumatic accidental injury, (2) supply a section for occupational diseases, and (3) broaden the second injury fund so as to provide compensation for those cases in which there is true aggravation of pre-existing condition. Through such revision it should then be possible to encourage the employment of the physically handicapped, maintain realistic workmen's compensation insurance rates, and enable physicians to be more specific in the evaluation of injuries.

The committee feels that pre-employment physical examinations, when adequately performed and realistically evaluated, will do much toward simplifying administration of the law. It also believes safety programs should be promoted by employers in order to prevent injury. Finally, the committee feels that more complete rehabilitation of the injured worker should be sought rather than striving to indemnify him for a loss. ★★★

514-D East Woodrow Wilson Drive

POETIC PRESCRIPTION

Leonardo da Vinci put in verse what many a modern doctor finds himself prescribing. Free translation of a Da Vinci sonnet written in 1513 and just unearthed in Italy: "If you want to stay healthy, don't eat unless you are hungry; have a light, simple, well-cooked supper; chew your food well; stand after meals; never sleep in the middle of the day; drink only during meals—never on an empty stomach; avoid strain and excessive exercise; keep cheerful; conquer lust.

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A Mutual Concern

JOHN G. CADEN, JR., M.D.
Jackson, Mississippi

In this journal we are fortunate in having an excellent article written by an orthopedic surgeon in Denmark on the problem of mental retardation which is so highly prevalent in cerebral palsy. Dr. Lütken has experienced the same reaction on the part of parents as practitioners the world over have—that of utter resentment to mention that their child is mentally retarded.

Parents can accept the fact that their child has cerebral palsy, he is deaf, he is blind, he is aphasic, but mentally retarded—never. Unfortunately in the early development of treatment programs for cerebral palsy, these parents were aided in this line of thinking by the medical leaders of that day. Dr. Leslie B. Homan, professor of psychiatry at Duke University, has pointed out that the history of the study of cerebral palsy is very significant.

The pioneers in the field, especially the physicians who brought cerebral palsy from complete neglect to a high medical standard, understandably became emotionally attached to their chosen field and along with the parents engaged in considerable wishful thinking. They insisted that the only way to legitimately measure a cerebral palsy patient's intelligence was through trial in a treatment center. However, there was no measure before or after a period of treatment and when it became clear that many cerebral palsy patients after a trial of training were still severely retarded, they retreated to the new hypothesis that our testing tools could not be applied to cerebral palsy. Gradually with increasing numbers of part-time practitioners—psychologists, orthopedists, and pediatricians—entering the field, a more realistic approach to the problem of mental retardation evolved. Now it is generally accepted that our measuring tools are satisfactory in the great majority of cases and it is clear that 60 per cent of the cerebral palsy population is significantly retarded mentally with intelligence below 70 IQ.

Although this fact is now accepted by all medical leaders in the field of cerebral palsy, the lay leaders are understandably lagging. This is true because a great majority of these people are either parents of a cerebral palsied child or have close emotional ties to one. It is difficult for them to approach the problem realistically. They therefore have a tendency to set up small treatment centers about the state without any direct medical supervision. Subconsciously they shy away from any physician who might say that this or that child is untreatable or uneducable. They tend to seek token medical support by having some physician on their advisory board who seldom meets with them and who would be the first to admit among medical circles that he knows little about cerebral palsy but is only trying to help them out.

This would be of little significance if it were not for the fact that these unsupervised centers frequently give false hopes and serve as havens for groups of parents who have never accepted their children's true handicap. These people ignore the fact that all handicapped children improve with time, with or without treatment, and they accept credit for every new word and every new move that might occur. How many times have I had parents bring a nine or 10-year-old child back with fire in their eyes just to show that we said this child was uneducable and now he has learned five new words in the last four years and can count to 10. "If they could do that for him in such and such a center," they say, "think what you could have done for him if you had just wanted to."

This would also be of little significance if only the hurt feelings of the physician were taken into consideration. However, this is not the problem. The problem is that the child who has never been accepted by his parents for his true self cannot avoid developing an abnormal personality and frequently develops into a behavior problem. Any child needs to have realistic goals which he can reasonably attain and for which he is rewarded with love and affection. A mentally retarded child should be extended this same courtesy. Failure to do this in the field of cerebral palsy is highly prevalent and is one of the leading causes why 75 per cent of the adult cerebral palsy population have significant personality maladjustments. This is the problem that Dr. Lütken is trying to attack by a logical, well-thought-out educational program for the parents of cerebral palsied children. This is needed just as much in Mississippi as in Denmark and we are very fortunate in having this article published in our JOURNAL. ★★★

727 Carlisle Street

Facts for Freedom

S. LAMAR BAILEY, M.D.
Kosciusko, Mississippi

I

Nobody is particularly fond of completing questionnaires but almost everybody recognizes that the survey technique produces invaluable information for medical organization and practicing physicians. The Mississippi State Medical Association will soon undertake one of the most exhaustive studies in its 104-year history when inquiries with respect to professional fees are initiated. For the most part, there is no real measure of prevailing fees for the more frequently rendered surgical and medical services. The association knows *generally* but it does not know *exactly* what the going charge for a stated procedure under a stated circumstance amounts to. This is the hiatus for which the remedy is intended.

The first purpose of the professional fee study is that of devising a relativity index. A vast majority of physicians understand and appreciate the importance of relating one procedure to another economically—as long as nobody tells a doctor what he should charge. This, precisely, is the viewpoint of the Mississippi State Medical Association. Obviously, it, too, was the viewpoint of the California Medical Association when it made its monumental and pioneering study resulting in the universally acclaimed California Relative Value Schedule upon which a substantial segment of American medicine depends for fee structure guidance.

Another quite real value of the study will be in the area of determining the true costs of medical care in Mississippi. The Council on Socioeconomic Affairs is now committed to a study in this vast and not enough explored area. Valuable data, otherwise unobtainable, can be discovered, examined, and interpreted.

II

Some few physicians charge that relative value studies tend to put a price ceiling on what a professional charge can be. A very few claim that

Chairman, Committee to Study Relative Value Schedules; secretary, Council on Medical Service; past president of the association.

such a project amounts to regimentation of professional freedom. These allegations are unfounded and nothing could be further from the truth in the association's present endeavors.

Let it be succinctly understood that the Mississippi State Medical Association believes that a physician has the undeniable prerogative of placing a fair valuation upon his professional services. Furthermore, each physician must remain free to determine what he will charge. What the association is interested in knowing is what is being charged and reporting its findings, nothing more and nothing less.

Medicine's enemies—and they are not to be dismissed lightly—often attack the costs of medical care. Any thoughtful individual needs little persuading or explaining on this patently transparent tactic but medicine must have the facts if its defense is to be factually grounded. Any practitioner should, therefore, be glad to help adduce the facts, recognizing that he is contributing to the preservation of his professional freedom.

III

Relative value studies do not in themselves fix professional fees but they do assist in removing some aspects of actuarial uncertainty in the sound administration of prepayment and insurance plans. Properly presented and understood, relative value guides *may* be a sufficient remedy to many problems of health care financing. Finally, if medical organization ignores the opportunity to suggest relativity guides, then this task will certainly be undertaken by those less qualified, among whom will assuredly be those like 44 liberal senators who voted unsuccessfully for Forand-type legislation last August.

At the 92nd Annual Session, the House of Delegates concurred in the concept that relative value guides are useful in helping to prevent inequities in insurance and prepayment plans, for example, overcoverage and undercoverage in the same plan indemnity contract. Further, they can assist the public to understand and meet its responsibility to pay for health care and for promoting appreciation of current health care costs. Finally, these guides can assist physicians in interpreting values of professional services in economic terms.

IV

When the questionnaire comes in your mail, be certain that it is accorded the attention and priority it deserves. Complete it promptly and accurately and return it to your association so the facts can be known and published. No policy utterance, no commitment of any physician as to professional fees or services, no regimentation, and no agreements will be made without the full lease, consent, and direction of the House of Delegates. All of this is to say that the Mississippi State Medical Association recognizes individual professional prerogative, believes in it, defends it, and wants to discover the facts to assure it. ★★★

North Jackson Street

Pharmaceuticals, Fables, And Faraway Kingdoms

Once upon a time—for this is a medical fable—there was a small kingdom in a faraway land. The king was very good because he ruled by the will of his people. Taxes were quite small, just enough, in fact, to support a small military force, the law-making body elected by and responsive to the people, the fair and impartial judiciary, and the treasury office. Everybody worked for his living and the more energetic and imaginative a person was, the more he earned. Some worked long and hard and became better off while a few others who were slothful were sometimes dependent upon the charity of their neighbors and community.

This was as the people wanted it because they regarded their government as their servant, not their master. Among those who labored diligently and honestly in the kingdom were the apothecaries. Some were very old, having succeeded their fathers and grandfathers in this honorable professional occupation. They used only the purest ingredients in their medicines, compounded them with great care, and tried each day to improve their quality. The people were glad to buy them because they trusted and respected the integrity of the makers.

The physicians of the little kingdom were diligent, too. They attended the sick and injured with devotion, accepted full responsibility for their professional acts, and expected in return only a reasonable fee for these services. When it was necessary to prescribe for a patient, some physicians would suggest one apothecary's medicine while another doctor would choose that of a second. Each based his decision upon his professional judgment and his estimation of the apothecary to whom he sent his patient. As a result, each apothecary tried with all his might to make the best medicine possible so he might merit the trust and confidence of physicians and patients.

Then one day an evil witch came to the little kingdom and cast a spell upon the good king and

the parliament. The witch decreed that everyone should be taxed according to his ability to pay and that the government—which was now growing quite large—should supply all things to each according to his need. No longer were the apothecaries allowed to make and sell their individually identified medicines. There was a state apothecary where the medicines were known only for what they were generally intended. The physicians were required to treat each patient under a government program of care and receive their remuneration from the treasury. Their responsibility to the government became greater than that to the patient and much illness was poorly treated.

The diligent were taxed into destitution and the slothful were supported generously by simply remaining slothful. The good king could do nothing because he was a victim of the evil spell of the wicked witch. Many of the good people wept because the happy, vigorous days of hard work and individual responsibility were no more. In fact, nobody lived happily or healthily ever after.

I

Print fairy tales in a state medical journal? Indeed yes, if a point can be made. Senator Estes Kefauver is resuming his pharmacological circus and limbering up his liberal blacksnake whip on the independent, ethical pharmaceutical manufacturers again. His purpose is obvious: Stifle competition, kill the brand names, promote the anonymity of the generic—all in the name of price economy with quality thrown bodily out the window. Misshapen, warped philosophy and tortured logic contend that the elimination of brand names would lower the cost of drugs without affecting quality. The idea is that the doctor writes "antihistamine" on the prescription instead of "Dimetane," "Polaramine," "Triaminic," "Benadryl," or any of the other well-known and trusted preparations.

This, of course, is a bunch of economic and pharmacological hogwash because it doesn't happen to work out that way. The underlying fallacy of the generic-prescribers' mouthings is that present high quality would remain constant while the costs of individual research, clinical testing, quality control, advertising, and marketing would decline to zero. Thus, the cost of good drugs, they say, would decline and everybody would be the better for it.

No physician wants to abdicate professional responsibility and write a word on a prescription pad which he *hopes* will help the patient. Doctors want to name the drug they believe most efficacious for the particular and peculiar condition they have been called to treat. Few if any pharmacists want to be pressed into the practice of medicine by being forced to choose for doctor and patient alike the drug they feel is nearest the generic word on the prescription pad.

And what druggist will have a lesser electric bill, lower rent, and generally cheaper overhead cost whether he sells by brand name or generic designation? If the pharmacist is forced to supply medications by generic name, he may also be forced to purchase preparations on a price-not-quality basis to meet competition.

II

Previously, JOURNAL MSMA has reported that 8,000 compounds were investigated in the development of isoniazid. One pharmaceutical organization studied 34,000 potential antibiotics and 8,000 chemicals in a search for better broad spectrum agents. And of the 42,000 compounds investigated, only six—that's correct, six—were considered worthy of clinical testing. In 1958, the American pharmaceutical industry spent $200 million on *private, competitive* research.

Dr. F. P. Rhoader has written that if the use of generic name products were to become widespread, the amount of money for research would diminish greatly. "Without brand to protect the investment in research and insure funds for further research," he says, "the leading pharmaceutical companies will be forced to greatly curtail their research activities. Thus, in a relatively short time the use of generic names would seriously cripple the industry that has in the last 25 years produced innumerable miracle drugs, enabling the physician to give the American public the world's highest standard of health."

III

The matter of health care cost has been unbelievably distorted—Senator Kefauver especially included. The disease that was once an almost certain killer today yields to modern medicines. Loss of earnings, long term hospitalization, and high mortality are factors the good senator puts aside as he attacks the really reasonable cost of a drug which has changed all of this.

Dr. Rhoader continues: "If the long range intent is the destruction of independent pharmaceutical research, it would be difficult to formulate a more effective and diabolical scheme. For the substitution of generic products instead of brand names would, inevitably, result in the disappear-

ance of free private research. The public would then insist that government fill the void. Thus, another giant step toward socialism would result."

Does anybody really want this to come to pass? Probably not, because never is quality more revered and unquestioned than at the sickbed—especially by the occupant. And this is a matter of quality as well as economics where the latter is distinctly secondary. But even the Kefauvers have nothing on the economic side to argue because drugs that do the job are bargains and almost everybody is willing to agree to this solid proposition.

IV

Let's wind it up this way: What are the things bought today by generic name and how much do you know about them? Take nails, for example. Most are sold as *nails* and as nothing else. Which ones are better? Which will hold for 30 years and which will rust and stain? Which should be bought and used to fasten together a $30,000 structure?

Squibb, one of the leading pharmaceutical houses, has contributed mightily to the ethics of its splendid industry. In advertising its products, it has consistently pointed out since 1858, the year of its founding by a doctor of medicine, that ". . . the priceless ingredient is the integrity of its maker."

Estes, the people are thinking and you haven't got a chance.—R. B. K.

PERSONALS

Charles H. Allen, who recently opened his offices in Beaumont, was honored by an open house given by the town. Dr. Allen, a native of Pinola, was graduated from Mississippi College and the University of Mississippi School of Medicine and interned at Confederate Memorial Center in Shreveport, La.

Jim Barnett, Brookhaven, has been appointed to the State Aeronautics Board for a four year term by Governor Ross Barnett. Dr. Barnett, no relation to the governor, will fill a vacancy left by C. H. Weathersby, McComb, whose term expired. He owns his own plane, is a licensed pilot, and an active member of the Flying Physicians.

Austin P. Boggan, Decatur, is one of two doctors in the nation featured in the August 15 issue of *Medical Economics*. The national professional magazine published a story concerning doctors and their automobiles. Dr. Boggan chose one of the small, compact cars because of gas savings and adaptability to rural roads. The other physician, Dr. Francis X. Bryan of Los Angeles, chose a specially built, $15,000 automobile. The author points out the advantages to each with reference to his environment.

James E. Booth, Eupora, has been named president-elect of the Eupora Rotary Club.

W. N. Crowson, Steve C. Leist, and Robert Ray McGee have planned a medical center for Clarksdale. The first step in the center's development was taken recently when construction began on their new medical office building. Separate two-doctor suites will be occupied by each of the three, but they will use a central x-ray department and laboratory.

John G. Egger, Drew, has been elected president of the Drew Rotary Club. Leadership runs in the family: Mrs. Egger is state Auxiliary president-elect.

Lewis George, Bobby F. King, and Kelly Segars, associates in the Iuka Clinic, have opened a clinic in Tishomingo, which is staffed six afternoons a week.

Sam Jones Hooper, Jackson, was among the 26 physicians and five dentists honored for 50 years of service to their communities by the University of Tennessee Medical Units at commencement exercises September 25. Dr. Hooper received his doctor of medicine degree in 1909 from the Memphis Hospital Medical College which was consolidated with the old UT College of Medicine in 1913.

Jorge A. Rodriguez, Jackson, has announced the opening of his office for the practice of general and chest surgery in the Medical Arts Building.

James T. Thompson, Moss Point, has been elected president of the Moss Point Chamber of Commerce.

John C. Williams, Vicksburg, has joined the staff of the Martin Memorial Clinic and will be associated with B. B. Martin, Samuel I. Fuerst, and Thomas E. Magee. Dr. Williams is also a member of the medical staff of the Vicksburg Infirmary. He received his doctor of medicine degree from Louisiana State University and interned at the University of Mississippi School of Medicine. He recently completed a residency in Internal Medicine at the University of Mississippi.

MEETINGS

NATIONAL AND REGIONAL

American Medical Association, November 28-December 1, 1960, Washington, D. C., F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago 10, Ill.

American College of Surgeons, October 10-14, 1960, San Francisco. William E. Adams, Secretary, 40 E. Erie St., Chicago 11, Ill.

American Academy of General Practice, April 13-20, 1961, Miami Beach, Florida. Mr. Mac F. Cahal, Executive Director, Volker at Brookside, Kansas City 12, Mo.

Southern Medical Association, October 31-November 3, 1960, St. Louis. Mr. Robert F. Butts, Executive Secretary, 2601 Highland Ave., Birmingham 5, Ala.

Gulf Coast Clinical Society, October 12-13, 1960, Biloxi, Mississippi. George W. Rogers, Secretary, P. O. Box 37, Handsboro, Miss.

STATE AND LOCAL

Mississippi State Medical Association, May 9-11, 1961, Biloxi. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson, Miss.

Mississippi Chapter, American College of Surgeons, November 25, 1960, Jackson, Dr. Edward C. Hamilton, Suite 201-5 Hewes Building, Gulfport, Miss., secretary.

Amite-Wilkinson Counties Medical Society, First Tuesday March, June, September, December. S. E. Field, Centreville, Miss., Secretary.

Central Medical Society, First Tuesday Monthly, 6:30 p.m., Robert E. Lee Hotel, Jackson, Miss. C. G. Sutherland, 918 N. State St., Jackson, Miss., Secretary.

Claiborne County Medical Society. D. M. Segrest, Port Gibson, Miss., Secretary.

Clarksdale and Six Counties Medical Society, Fourth Wednesday March and September, 2:00 p.m., Clarksdale, Miss. Robert R. McGee, 150 Yazoo St., Clarksdale, Miss., Secretary.

Coast Counties Medical Society, First Wednesday March, June, September, and November. Charles N. Floyd, 1412-23rd Ave., Gulfport, Miss., Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Miss., Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando, Miss. L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Miss., Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Monthly, 7:30 p.m., Natchez Country Club, Natchez, Miss. W. T. Colbert, 539 Park Place, Natchez, Miss., Secretary.

North Central District Medical Society, Second Wednesday March and September. W. A. Middleton, 214 Summit St., Winona, Miss., Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December, Tupelo, Miss. Eugene M. Murphey, III, 421 Main St., Tupelo, Miss., Secretary.

North Mississippi Medical Society, First Thursday January, April, and October, Oxford, Miss. R. L. Wyatt, Holly Springs, Miss., Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. George B. Stewart, 215 Kirkwood St., Picayune, Miss., Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. Thomas F. Puckett, 715 Arledge St., Hattiesburg, Miss., Secretary.

Tri-County Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Miss., Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg, Miss. Thomas H. Mitchell, The Street Clinic, Vicksburg, Miss., Secretary.

Book Reviews

Office Diagnosis. By Paul Williamson, M.D., with illustrations by Ann Williamson. Cloth, 470 pages with about 477 line drawings. Philadelphia: W. B. Saunders Company, 1960. $12.50.

Arranged in 12 divisions, this practical approach to diagnosis is written in an intriguing homespun style. The introduction on the art of diagnosis will appeal to all seasoned practitioners. Although titled to indicate a limitation to office work, the scope is broad, and mentions some hospital problems. Its thoroughness carries it into procedures often left to the specialist. Written for the general practitioner, the specialist will want it at hand, especially the internist, the orthopedic surgeon, and the neuro-psychiatrist.

The practical approach of suspecting the diagnosis is employed with efficiency and developed to establish or exclude a particular disease entity. The "If you suspect . . ." approach is well developed in the 12 divisions which are: I. Nonspecific Symptoms, II. Dermatologic Symptoms, III. Symptoms of the Head and Neck, IV. Symptoms of the Chest, V. Respiratory Symptoms, VI. Cardiac Symptoms, VII. Abdominal Symptoms, VIII. Digestive Tract Symptoms, IX. Genitourinary Symptoms, X. Gynecologic Symptoms, XI. Symptoms of the Musculoskeletal System, and XII. Symptoms of Circulation. These end without a tabulated bibliography. However, many references are included in the text.

Interwoven throughout are excellent drawings which do not carry the conventional tedious legends but are captioned in the text. For example, the section on "Pain in the Knee Joint" includes, in the paragraphs on injuries to the lateral ligaments, ". . . What usually happens is that the ligament is avulsed or jerked free from its attachment to the tibia like this:" Then follows a clear drawing illustrating a torn internal lateral ligament.

Of particular value is the section on cardiac pain. The six and a half pages on coronary artery disease are concise and to the point. If I may say so, these six and a half pages are worth the price of the book. The interpretation of the electrocardiogram will be of value to many.

The psychogenic and neurogenic origin of much of the everyday office problems are described well in the section on nonspecific symptoms and then focused when the systems are discussed. To cite a section in point, the discussion of "Mucous Colitis" will enhance the therapeutic armamentarium of many practitioners.

Both the description of referred ureteral pain and the discussion of uterine myoma, carcinoma, and endometriosis add to the practical value of the book. Debatable propositions like, "there is no such thing as a normal temperature" add spice to the work. The technical error of illustrating a tourniquet around the thigh and calling it the "leg" will not be challenged by the critic who could not produce a study that will be widely received because of its practical value.

STANLEY A. HILL, M.D.

Current Surgical Management II, A Book of Alternative Viewpoints on Controversial Surgical Problems. By John H. Mulholland, M.D., editor in chief, New York University College of Medicine; Edwin H. Ellison, M.D., Marquette University School of Medicine; Stanley R. Friesen, M.D., University of Kansas Medical Center. With contributions by 50 authorities. Cloth, 348 pages. Philadelphia: W. B. Saunders Company, 1960. $8.00.

This book is not a second edition or a revision, but rather is an extension of Volume I. No attempt has been made to cover the entire field of surgical activities, but the authors have selected areas in which there are likely to be differences of opinion. The subjects covered include: abdominal surgery, acute renal failure, and certain phases of vascular surgery, namely arterial insufficiency of the lower extremities and thrombo-embolism. The three editors and the 50 contributing authors are well-recognized authorities in their respective fields.

The book is written on good paper with easily readable type and is concisely presented. Some of the articles are well illustrated, but many have no illustrations, which detracts somewhat from the clarity of presentation of some of the subjects.

I would not recommend this book for the medical student or the young surgeon in training, as the discussion of controversial subjects might tend to confuse the surgeon of lesser experience. The

young surgeon needs to learn first one generally acceptable procedure for a given problem before he attempts to learn the many different methods by which he may reach a similar conclusion.

The mature surgeon of extensive experience will find this an excellent presentation of controversial subjects which will enable him to better individually treat a given condition where there are several courses of action. As the editors state, "This book does not provide answers. It does demonstrate how certain authorities arrive at their own answers." Thus, a reader might be guided in selecting a course of action which more nearly solves the individual problem which each patient presents.

This book tends to lend support to the fact that there is more than one good way to arrive at a successful conclusion of a given problem.

GEORGE H. MARTIN, M.D.

Medicine Today: A Report on a Decade of Progress. By Marguerite Clark, medical editor of Newsweek Magazine. Cloth, 360 pages. New York: Funk & Wagnalls Company, 1960. $4.95.

In *Medicine Today,* Mrs. Clark has perhaps produced the most readable summary of medicine in the atomic age. She first began medical writing 20 years ago when, after doing research for a mystery novel with a poison plot, she discovered that medical facts were indeed more exciting than fiction. This enthusiasm for things medical carries over into her writing and results in a highly appealing product.

Although Mrs. Clark has aimed her book for the nonprofessional reader, she by no means "writes down." Doctors will find that she has gathered the varied discoveries of the last decade and presented them in concise and logical order. From her vantage point as one of the nation's outstanding medical journalists, she is able to inject personal conversations and experiences with today's "greats" in the world of medicine. And all facts, from statistics, to involved explanations, to personality descriptions, are couched in terms so fresh and engaging that even the most knowledgeable reader must find something new and challenging.

She writes of the big problems—cancer, mental health, arthritis, diabetes—and of the little nuisances—tooth decay, acne, allergies. Everything is seen in a personal light—from the viewpoint of the patient who suffers, the doctor who tries to treat, and the researcher who seeks a cure.

Perhaps the key to her writing is summed up in a preface statement. When someone asked, "Don't you grow depressed, constantly writing about death, disease, and destruction?" she replied, ". . . I am never depressed by what I see or hear. To the contrary, I am stimulated, encouraged, and fired with enthusiasm over the scientific progress that is being made, step by step. . . ."

Mrs. Clark undoubtedly has a "feel" for medical writing. While she is consistently enthusiastic, she is never sensational. As inherently subjective subjects as artificial insemination and psychosomatic ills are discussed with the objectivity necessary for a successful journalist.

Medicine Today is to be highly recommended —as an almanac for the general public and a "pep" pill for the physician.

BETTY MILLER

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"Keep giving her those pills . . . and remind her that her next bridge club meeting is only a week away."

State Cancer Workers Discuss Campaign Plans, Hear Recent Developments at Jackson Meeting

Volunteer workers for the Mississippi Division of the American Cancer Society met Thursday, Sept. 8, to hear the latest cancer news and to discuss the upcoming campaign.

Biggest surprise of the day's meeting came when Richard N. Satterfield, executive director of the Mississippi Division, announced that he would be leaving to assume direction of the southeastern Michigan district at Detroit.

Shown is the physician panel which discussed the status of cancer at the Sept. 8 meeting of the Mississippi Division, American Cancer Society. From left to right they are Drs. Curtis P. Artz, Jr., Robert J. Moorhead, James Grant Thompson, Guy T. Gillespie, Jr., James M. Packer, Dewitt T. Brock, and Michael Newton.

The meeting was held in the new convention hall of the King Edward Hotel. Approximately 150 delegates and guests attended.

Mississippi doctors played an important part in the annual meeting program. In the morning session, Guy T. Vise, Jr., Meridian, a pre-med senior at Harvard University, read his father's paper on "The Relationship Between Smoking and Lung Cancer." Dr. Vise was recovering from eye surgery and unable to attend.

In his paper, which definitely linked lung cancer to smoking, Dr. Vise maintained that "filters are fakes." "This is my personal belief," he said, "but I think filters will increase the incidence of cancer of the lung. Why?—because the milder and more filtered the smoke, the more deeply it must be inhaled to give you the 'kicks.' "

The Meridian physician said he advised his patients "to smoke, if they just have to smoke, strong cigarettes or pipes because they don't have to be inhaled as deeply to get the desired sensation."

Dr. Vise concluded that education of children was a vital key to reducing the amount of smoking—even suggesting that singing commercials be written to combat those of the tobacco industry.

Following Dr. Vise's paper, a panel of Jackson physicians considered, "The Cancer Picture Today." Participants were Dr. Curtis Artz, "Cancer of the Breast"; Dr. DeWitt T. Brock, "Cancer of the Gastrointestinal Tract"; Dr. Micheal Newton, "Cancer of the Female Generative Tract"; Dr. James Grant Thompson, "Cancer of the Skin"; Dr. James Packer, "Radiological Approach to the Treatment of Cancer"; and Dr. Guy Gillespie, "Chemotherapeutic Approach to the Treatment of Cancer." Dr. R. J. Moorhead, Yazoo City, served as moderator.

Highlight of the afternoon's activities was the election of new officers. Officers already named for 1961 are Dr. J. G. McKinnon, Hattiesburg, president; Dr. John G. Archer, Greenville, vice president; Mrs. Hunter Cade, Lexington, woman vice president; Mrs. Clare Hornsby, Biloxi, secretary; George C. Wallace, Jackson, treasurer; Dr. George E. Twente, Jackson, professional delegate to the annual meeting of the American Cancer Society.

Elected at the Sept. 8 meeting were Joe Carson, Meridian, lay delegate, and 20 members of the Mississippi Division's Board. Scientific directors named were Drs. John G. Archer, Greenville; Guy T. Gillespie, Jackson; Glen T. Pearson, Hattiesburg; Forrest Bratley, Jackson; William Thornton, Meridian; J. G. McKinnon, Hattiesburg; T. E. Ross, Hattiesburg; A. V. Beacham, Magnolia; Bedford F. Floyd, Gulfport; Augustus Street, Vicksburg. Dr. Bratley will serve as chairman of the Board.

Another feature of the afternoon schedule was a panel on campaign problem solving. Physician participants were Dr. A. L. Gray and Dr. Kenneth Heard, both of Jackson.

The day's program ended with the annual awards dinner. Dr. David S. Pankratz, 1960 president of the Mississippi division, was awarded the Bronze Medal from the National ACS, one of 50 given throughout the nation for "important contributions to cancer control." Dr. Will Jenkins, Port Gibson, received the Mississippi Division Bronze Medal for his "effective service" as 1959 division president.

Special guests for the meeting were Jess Speidel, II, New York, vice president for crusade, ACS, who spoke at the luncheon, and dinner speaker Clifton R. Read, New York, vice president for public education and information, ACS.

State Cancer Director Announces Resignation

Richard N. Satterfield, executive director of the Mississippi Division of the American Cancer Society, announced his resignation at the Sept. 8 annual meeting of the state society.

Satterfield, who has been with the Mississippi Division for the past four years, will take over the direction of the southeastern Michigan district at Detroit.

Speaking to the morning session of the annual meeting, he said, "I have enjoyed knowing all of you and feel that you are my friends. I hope that this work will mean much to you and that you will remain with it until the last shot has been fired against cancer."

During the evening banquet, the division passed a resolution praising him for the progress in education and service by the division during his term of office.

Before taking directorship of the Mississippi Division, Satterfield practiced law in Nashville, Tenn. He studied at Vanderbilt University in Nashville and received his law degree from Cumberland University in Lebanon, Tenn.

The new executive director has not yet been announced.

Six Join University Faculty

Six new faculty appointments have been announced by the University of Mississippi School of Medicine. Five are for newly-created teaching positions and one fills a vacancy left by a resignation.

Karl August Bolten, M.D., named assistant professor of obstetrics-gynecology, taught at Louisiana State University for three years before completing a residency in pathology at Oklahoma University this year. Peter Cervoni, Ph.D., assistant professor of pharmacology, last year did postdoctoral research at Downstate Medical Center in New York.

Frederick Lynch McGuire, Ph.D., appointed assistant professor of psychiatry, received his training at New York State University. New assistant professor of neurosurgery and anatomy, Ervin William Powell, Ph.D., comes to the university from Creighton University, Omaha, Neb. John Arnold Gronvall, M.D., instructor in pathology, just completed a residency at the University of Minnesota. Forrest Travis Tutor, M.D., will replace G. Scarcello, M.D. as instructor in neurosurgery. He completed his residency at the University of Cincinnati.

Brunschwig, Karnofsky To Speak at Seminar

Dr. Alexander Brunschwig and Dr. David A. Karnofsky of the Memorial Center for Cancer and Allied Diseases, New York, will be the featured speakers for the Third Cancer Seminar.

Scheduled for Dec. 1, the seminar is sponsored by the Mississippi Division of the American Cancer Society. It will be held at the University of Mississippi School of Medicine.

Dr. Brunschwig will speak on "Carcinoma of the Cervix," and "Pelvic Tumors." Dr. Karnofsky's subjects are "The Current Status of Chemotherapy in Cancer Treatment," and "The Treatment of Lymphomata With Illustrative Cases."

During the morning session a panel discussion on "Cancer of the Gastrointestinal Tract" will be held. Dr. George H. Martin, Vicksburg, will serve as moderator. Panelists include Dr. Brunschwig, Dr. D. T. Brock, Jr., Jackson; Dr. William L. Thornton, Meridian, and Dr. Dawson B. Conerly, Jr., Hattiesburg.

The afternoon panel moderated by Dr. Warren N. A. Bell, Jackson, will consider "Chemotherapeutic Approach to the Treatment of Cancer." Panelists will be Dr. Karnofsky, Dr. Albert L. Meena, Dr. John T. Kitchings, and Dr. Guy T. Gillespie—the last three from Jackson.

Dr. William A. Neely, Jackson, will preside over the morning session and Dr. R. J. Moorhead, Yazoo City, over the afternoon meeting. Dr. David S. Pankratz, dean of the University School of

Medicine, and president of the state cancer society, will present the welcome address.

General Practice Academy Holds Scientific Assembly

The twelfth annual Scientific Assembly of the Mississippi Academy of General Practice met Sept. 28-29 in Jackson.

Approximately 300 physicians from all corners of the state attended the two-day program which featured lectures, discussions, and scientific exhibits.

Speakers for the Scientific Assembly included Drs. William C. Warner, Jackson; H. B. Christianson, New Orleans; I. Frank Tullis, Memphis; John T. Leckert, New Orleans; J. P. Greenhill, Chicago; Lester D. Bibler, Indianapolis, and Philip Thorek, Chicago.

Moderators for the three lecture sessions were Dr. Tom H. Mitchell, Vicksburg, president of MAGP, and Dr. Guy T. Vise, Meridian, and Dr. J. P. Culpepper, Hattiesburg, co-chairmen of the program committee for this assembly. Dr. R. J. Moorhead, Yazoo City, served as Academy president during the past year, and Dr. John R. Bane, Jackson, as secretary-treasurer.

Wilson to Speak To Mississippi Surgeons

Dr. Harwell Wilson, Memphis, Tenn., will be the featured lecturer for the annual meeting of the Mississippi Chapter, American College of Surgeons.

Dr. Wilson will speak on "Personal Experience in Surgery of Tumors of the Liver." The meeting is scheduled for Nov. 25 at the King Edward Hotel, Jackson.

Other speakers on the program will be Dr. Herbert G. Langford, Jackson, who will discuss "Hypertension Due to Renal Artery Occlusion," and Warren N. A. Bell, Jackson, who will talk on "The Newer Chemotherapeutic Agents for Tumor Control." A panel discussion on "Complications of Surgery" moderated by Dr. Curtis P. Artz, Jackson, will also be held. Panelists will be Dr. George F. Archer, Greenville; Dr. Bedford F. Floyd, Jr., Gulfport; Dr. W. H. Parsons, Vicksburg; Dr. Leslie V. Rush, Meridian, and Dr. Wilson.

Dr. G. Swink Hicks, Natchez, MSMA president, is president of the Mississippi Chapter. Registration for the 1960 annual meeting will begin at 1:30 p.m. in the foyer of the King Edward.

Ricks Attends Opening Of Disease Control Center

Dr. H. C. Ricks represented Mississippi medicine at the dedication of the U. S. Public Health Service Communicable Disease Control Center held Sept. 8 in Atlanta, Ga.

Dr. Ricks, director, Division of Laboratories, Mississippi State Board of Health, brought congratulations on behalf of state physicians. He said, "I am authorized to state . . . that the unmatched, invaluable work of the United States Public Health Service in communicable disease control will always enjoy a full measure of support and cooperation from all Mississippians."

Bi-State Urological Meeting Held

The urological societies of Louisiana and Mississippi held a combined meeting Aug. 19 and 20 at the Edgewater Gulf Hotel.

Principal program speakers were Dr. Michael O'Heeron, Houston, Tex., and Dr. Robert Lich, Louisville, Ky.

Special feature of the meeting was the presentation of unusual diagnostic problems in urological patients by individual society members.

Dr. George W. Vickery, Gulfport, is president of the Mississippi Society and Dr. Gerald Wessler, Gulfport, is secretary-treasurer. About 100 persons registered for the meeting, the first joint session of the two groups.

Medical Artist Signs Ciba Contract

Dr. Frank H. Netter, internationally known medical artist, has signed a new 10-year contract with Ciba Pharmaceutical Products, Inc., according to T. F. Davies Haines, president of the company.

Associated with Ciba for 14 years, Dr. Netter is currently working on a 20-year project of painting 20,000 color illustrations of every significant part of the body and diseases that affect it. He is now on the third of the nine volume series, which is called "The Ciba Collection of Medical Illustrations."

Mississippi Physicians Are Growing Younger

Mississippi physicians are growing younger by the year. So show age distribution data just released by the Comptroller Department at association headquarters.

As of July 1, 1960, 39.7 per cent of the state's doctors were under 40 and only 22.5 per cent were over 60. This contrasts with figures from the same time in 1953 when there was an equal number of physicians (34 per cent) under 40 and over 60.

Since Jan. 1, 1960, the total number of licensed Mississippi physicians has decreased from 1,682 to 1,661. This included a net decrease of 18 among white males and of 15 among doctors 50 years and older. Of the remaining 1,661, over three-fourths are under 60 and two-fifths are under 40.

TABLE I

AGE DISTRIBUTION, ALL MISSISSIPPI PHYSICIANS

As of July 1, 1960

Age Group (1)	*Total (2)*	*Percentage (3)*
Under 40	660	39.7%
40-49	370	22.3%
50-59	257	15.5%
60 and over	374	22.5%
Totals	1,661	100.0%

Seventy-one per cent of the doctors now practice in towns of over 2,500 population, as compared with 64 per cent in 1953. Only 481 are located in communities under 2,500. Of the doctors under 60, 25 per cent practice in the smaller towns while 42 per cent of the physicians over 60 are found there. Seventy-five per cent of those under 60 work in towns over 2,500 while 58 per cent of those over 60 practice in the larger towns.

TABLE II

URBAN-RURAL DISTRIBUTION, ALL PHYSICIANS

As of July 1, 1960

Size Community (1)	*Under 40 (2)*	*40-49 (3)*	*50-59 (4)*	*60 and Over (5)*	*Total (6)*
Under 2,500	195	78	50	158	481
Over 2,500	465	292	207	216	1,180
					1,661

TABLE III

COMPARATIVE GAINS

January 1, 1952-July 1, 1960

Year (1)	*Age Group Under 40 (2)*	*40-49 (3)*	*50-59 (4)*	*60 and Over (5)*	*Year Total (6)*
1952	437	301	153	570	1,461
1953	489	312	159	528	1.488
1954	535	320	169	514	1,528
1955	548	334	174	476	1,532
1956	598	331	204	452	1,585
1957	602	350	226	431	1,609
1958	615	351	239	428	1,633
1959	614	367	257	405	1,643
1960	660	370	257	374	1,661
Net Change	+223	+69	+102	–196	+220

Mississippi State Medical Association
Comptroller Department, August 25, 1960

All age groups under 60 have increased steadily since 1952 while the 60 and over category has declined. The data show the greatest increase has come in the under 40 spot which has a net gain of 223 since 1952. In all, the 60 and over group has lost a total of 196 since the same year.

As of July 1, 1960, there were 1,559 white male, 42 white female, 58 nonwhite male, and two nonwhite female physicians in practice in the state. Issaquena remains the only county without a physician.

Arizona Plans Cancer Seminar

The Arizona Division of the American Cancer Society has scheduled Jan. 12-14 for its Ninth Annual Cancer Seminar.

To be held in Tucson, the seminar will concentrate on "Changing Concepts in Tumor Formation and Therapy." Various aspects of chemotherapy, virology, endocrinology, and environmental factors will be discussed in relationship to tumor formation and therapy.

McCharen Field Dedicated in West Point

An estimated crowd of 5,000 attended the August dedication services for the new West Point and Clay County Airport—christened "McCharen Field" in honor of the late Dr. L. L. McCharen.

In making the dedication speech, Henry Harris, publisher of the West Point *Daily Times Leader,* said, "Those of us here at home knew 'Dr. Mac' as the warmhearted family physician that he was. He healed our bodies, gave birth to our children, and inspired determination in patients facing the test of physical endurance."

As chairman of the Aviation Committee of the West Point Chamber of Commerce, Dr. McCharen spearheaded plans for the airport before his unexpected death Feb. 7 at the age of 46. Mr. Harris estimated that Dr. McCharen was the first to land and take-off from the new runway and predicted that in years to come Dr. McCharen's vision of a modern airport with regular airline service would be a reality.

Dr. McCharen was a member of the Northeast Mississippi Medical Society, MSMA, and the Flying Physicians Association.

Emory Plans Postgraduate Ophthalmic Course

The department of ophthalmology, Emory University School of Medicine, is planning a postgraduate course in ophthalmic surgery. Scheduled for Dec. 1 and 2, the program will be held in the auditorium of the Grady Memorial Hospital, Atlanta, Ga.

Guest lecturers will be Dr. Frank D. Costenbader, senior attending ophthalmologist, and chairman of the department of ophthalmology, Children's Hospital, and senior attending ophthalmologist, Washington Hospital Center, Washington, D. C.; Dr. John M. McLean, professor of ophthalmology, Cornell University School of Medicine, New York; and Dr. Harold G. Scheie, professor of ophthalmology, University of Pennsylvania School of Medicine, Philadelphia, Penn.

Diagnostic principles and techniques, preoperative and postoperative management, and surgical principles and techniques in extraocular muscle surgery, cataract surgery, and glaucoma surgery will be discussed.

Further information may be obtained from Dr. J. J. Stokes, director, postgraduate education, Emory University, 80 Butler St., S.E., Atlanta 3, Ga.

Center for Blind Set Up at Kuhn

A center to rehabilitate the blind, a division of the State Department of Public Welfare, has been set up in Vicksburg at the Kuhn Memorial Hospital.

According to Dr. Nathan Lewis, hospital superintendent, this is the first adjustment center of its kind in Mississippi. Dr. Lewis said, "Blind patients will be taught all walks of daily life from finding their way around Vicksburg to making purchases at the stores to getting in and out of automobiles."

The center is equipped for vocational training such as typewriting and for re-educating blind women to do housework. Only 25 patients at a time will be accepted by the center which opened Aug. 15.

Diabetes Week Set for Nov. 13-19

Diabetes Week this year is set for Nov. 13-19, according to a release from the American Diabetes Association.

Preliminary planning has been done by Dr. Joseph H. Crampton, Seattle, Wash., who succeeded Dr. Louis K. Alpert, Washington, D. C., as chairman of the committee on public education and detection. Dr. Crampton writes that materials are now available to committees on diabetes of county and state medical societies but that all orders must be received by Oct. 17.

Commenting on this year's drive, Dr. Crampton said, ". . . I am sure that a great deal can be accomplished during the year ahead. I hope that we will be able to achieve the high standard of service which has been set in the past."

National Nursing League Offers Fellowships

The National League for Nursing is now receiving applications for 1961 fellowships. Candidates must have their applications in by Jan. 15, 1961, for grants for study beginning summer or fall, 1961.

Further information may be secured from the National League for Nursing, Inc., 10 Columbus Circle, New York 19, N. Y.

Insurance Coverage Continues to Grow

Fourteen states now have more than 75 per cent of their population covered by health insurance, the Health Insurance Institute reported today.

New York State, with a coverage figure of 90.7 per cent based on more than 15 million insured residents, leads all 50 states. The Institute said other states in the 75 per cent or higher group are Connecticut (88.0), Pennsylvania (87.0), Rhode Island (86.3), Ohio (85.8), Vermont (85.0), Illinois (81.3), Missouri (79.9), Michigan (79.3), Massachusetts (79.0), Minnesota (78.3), Indiana (77.7), Delaware (77.1), and Colorado (76.3).

There are 29 states which have between 50 and 75 per cent of their populations covered by health insurance, and seven states which have less than 50 per cent of their residents so insured, said the Institute.

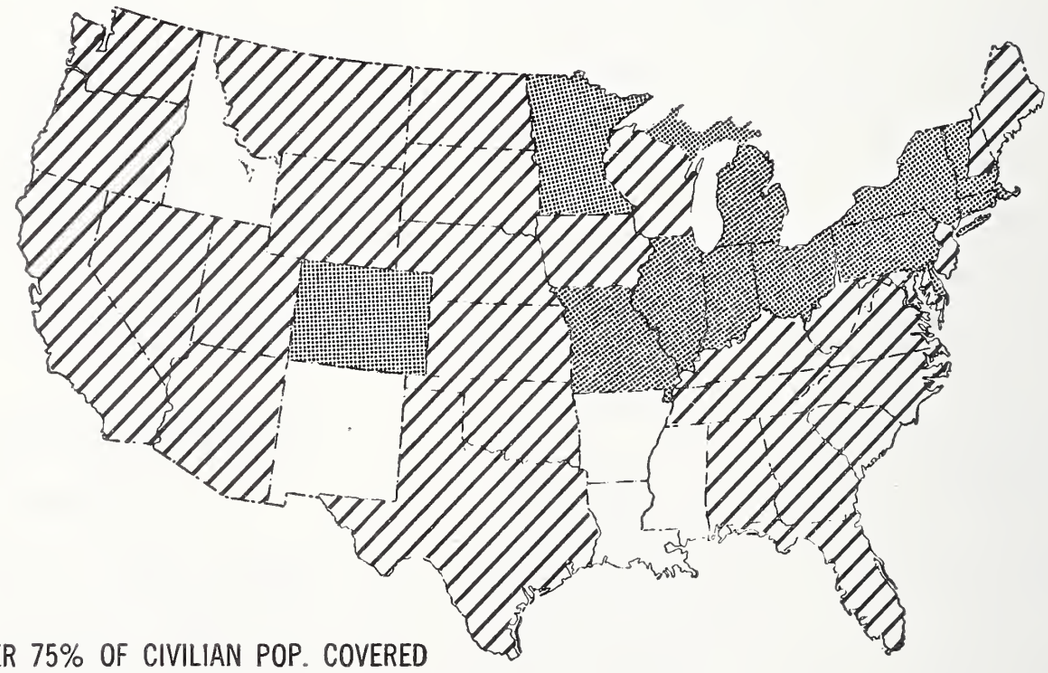
On a regional basis, the nine Northeast states of New York, New Jersey, Pennsylvania, Connecticut, Massachusetts, Rhode Island, Vermont, New Hampshire and Maine boasted the greatest percentage of population with health insurance, 84.5 per cent, based on 37 million insured persons out of the region's total population of 44 million.

The Midwest followed with 78.1 per cent coverage based on almost 41 million persons with health insurance out of 52 million population in the 12 regional states of Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska and Kansas.

The West ranked third with 66.3 per cent. More than 17 million persons have health insurance out of the better than 26 million persons living in the 13 states of Montana, Idaho, Wyoming, Utah, Colorado, Nevada, New Mexico, Arizona, Washington, Oregon, California, Alaska and Hawaii.

The South had 60.0 per cent coverage with more than 32 million insured persons out of the

PERCENTAGE OF CIVILIAN POPULATION WITH SOME FORM OF VOLUNTARY HEALTH INSURANCE PROTECTION, BY STATES, DECEMBER 31, 1959



OVER 75% OF CIVILIAN POP. COVERED

50-75% OF CIVILIAN POPULATION COVERED

UNDER 50% OF CIVILIAN POPULATION COVERED
(This includes Alaska and Hawaii)

54 million residing in the 16 regional states of Delaware, Maryland, Virginia, West Virginia, Kentucky, North Carolina, South Carolina, Tennessee, Florida, Georgia, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma and Texas.

At the close of last year, 127,896,000 persons (4.8 million more than at the end of 1958) had health insurance for a national health insurance coverage figure of 72 per cent, said the Institute.

From 1958 to 1959, all four regions showed an increase in the number of insured persons with the South leading the way. The South gained 1.6 million covered persons while the Midwest's total increased by 1.2 million, the West's by 1.1 million and the Northeast by .9 million.

One of the nation's newer states, Alaska, had the lowest coverage figure, 31.0 per cent, which, however, was up from the 1958 figure of 24.6 per cent. Hawaii's coverage figure was 45.9 per cent, said the Institute.

The Arthritis Problem: A Cure for Curers?

As far as one certain brand of shyster is concerned, the United States is a patsy paradise housing 11 million potential "customers." These are the hoaxers who aim their propaganda at the nation's numerous arthritic sufferers.

Although both the Federal Trade Commission and the Arthritis and Rheumatism Foundation have publicized the antics of these cure conjurers, millions continue to spend millions in an effort to find a cure. The $500 million a year food fad cult continues to take arthritics for $10 million a year, and arthritis victims annually spend $250 million for quack drugs and remedies and worthless treatments and devices. The government and the Foundation have declared all-out war.

A precombat skirmish came last summer when the FTC publicized its findings on a book, *New Hope for Arthritis Sufferers* offered to the public by Symon Gould, trading as the Health Guild. Reported the Commission: Persons following the book's plan for a "cure," may become permanently crippled.

The conflict progressed to man-to-man fighting on two books. The FTC attacked *Folk Medicine* by Dr. D. C. Jarvis, Vermont otolaryngologist, published by Henry Holt. On July 28, the Commission issued a complaint against the publisher of this best-selling health guide whose sales have hit the half-million mark. The complaint charges that the regimen in the book "will not arrest, correct or cure" such conditions as arthritis, infertility or the common cold and that ads falsely claim that it will.

Folk Medicine was previously involved in a complaint against false claims for a honey and vinegar mixture, "Honegar," which used the book for tie-in promotional ads, but sales of the book have continued unabated.

Another book now under attack is Dan Dale Alexander's *Arthritis and Common Sense,* published by Witkower Press in Connecticut, a company headed by the author. The FTC issued a cease and desist order the week of August 15 on book jacket and ad claims that "the dietary regimen in the book is a reliable treatment or cure for all kinds of arthritis or rheumatism, or that it will correct their underlying causes." The order against Witkower Press also found that the book contained the unsupported theories and opinions of a layman, whose high educational degrees are unearned. The order was a follow-up on an FTC complaint filed last November. Since its first publication in 1951, *Arthritis and Common Sense* has sold more than half a million copies—with sales increasing as controversy grows. The publisher plans an appeal through the courts.

Next targets, reports *Insider's Newsletter,* are two books by men experienced in the field: none other than Alexander and Jarvis. Alexander's newest feat is entitled *Good Health and Common Sense* and came out in September (Crown, $3.95). In a chapter titled "The Leading Question: What About Arthritis?," he restates his already well-known view: "You can eat your way into arthritis . . . and you can eat your way out!" (He dedicates a later chapter to his side of the currently raging controversy over *Arthritis and Common Sense.*) The new book outlines Mr. Alexander's "lubricating" food plan and offers suggested menus.

Dr. Jarvis' new book, *Arthritis and Folk Medicine* (out in September by Holt, Rinehart and Winston, $2.95), will offer his now-famous honey and vinegar mixture, plus other food remedies and a plan of home care. Possible "out" for new health books: Both publishers and authors make clear that the regimens recommended are not a substitute for orthodox medical care. Advertising campaigns on these new books will emphasize their value as guides to good health and good nutrition—rather than as "cures" for arthritis and other diseases.

AUXILIARY

Twente Speaks To Auxiliary Board

Dr. George E. Twente, Jackson, one of the leaders in MSMA's fight against Forand-type bills, spoke to the August meeting of the Woman's Auxiliary Executive Board on legislation.

Twenty-four officers attended the board meeting which was held at MSMA headquarters in Jackson.

Mrs. Lee R. Reid, Jackson, Auxiliary president, reported that Mrs. William Mackersie, president, Woman's Auxiliary to the American Medical Association, and Mrs. K. Howard, president-elect, Woman's Auxiliary to the Southern Medical Association, will attend the 93rd Annual Session in Biloxi next May. Mrs. Reid and Mrs. John Egger, Drew, president-elect of the Mississippi Auxiliary, are planning to attend the Presidents and Presidents Elect Conference in Chicago in October.

Five chairmen reported on the work of their committees. Mrs. John Bise, Jackson, nurse loan chairman, said that Auxiliary loans have been granted to two students entering the Baptist Hospital School of Nursing this fall.

Mrs. Arthur Brown, Columbus, AMEF chairman, asked for an increase in contributions this year. She reported a total donation of $663.70 for 1959 or $.85 per member.

Mrs. James T. Thompson, Moss Point, first vice president, announced that the yearbooks will be out in the near future. Mrs. Thomas Marland, Jackson, *Bulletin* chairman, asked that every officer subscribe to the publication. Mrs. M. S. Riddell, Winona, revision chairman, submitted the new bylaws which were read by Mrs. Wendell Holmes, McComb, secretary. Copies are to be sent to board members and county auxiliary presidents.

Other board members present at the meeting were Mrs. J. D. Simmons, Cleveland; Mrs. F. E. McCullough, Jackson; Mrs. A. T. Tatum, Petal; Mrs. R. H. McArthur, Jr., Jackson; Mrs. H. H. McClanahan, Jr., Columbus; Mrs. George Townsend, Forest; Mrs. Jack Daniel, Hattiesburg; Mrs. L. T. Carl, Jackson; Mrs. George E. Twente, Jackson; Mrs. H. C. Ricks, Sr., Jackson; Mrs. R. C. O'Ferrall, Jackson; Mrs. W. B. Hunt, Grenada; Mrs. G. Lamar Arrington, Meridian; Mrs. Frank Massengill, Brookhaven; Mrs. Frank Donaldson, Jackson, and Mrs. Gerald Cable, Hattiesburg.

Jones County Auxiliary Plans Project

The Jones County Medical Auxiliary has taken on the project of securing hospital type equipment for the County Medical Loan Closet. Although this was originally planned as a winter project, the need for larger equipment is so urgent that the group is presently appealing to the general public for donations. The equipment is used in the home care of the ill in the county.

Central Executive Board Meets

The new executive board of the Central Medical Auxiliary met at the home of Mrs. F. A. Donaldson to make plans for the coming year.

Members present were Mrs. T. A. Baines, Mrs. A. J. McIlwain, Mrs. A. W. St. Clair, Mrs. W. C. Warner, Mrs. R. W. Crowell, Mrs. H. C. Ricks, Mrs. George Riley, Mrs. Ben Folk.

Also, Mrs. J. R. Bise, Mrs. F. E. McCullough, Mrs. Sam Johnson, Mrs. O. P. Myers, Mrs. Coupery Shands, Mrs. James A. Chustz, Mrs. James Hardy, and Mrs. Lloyd Deddens.

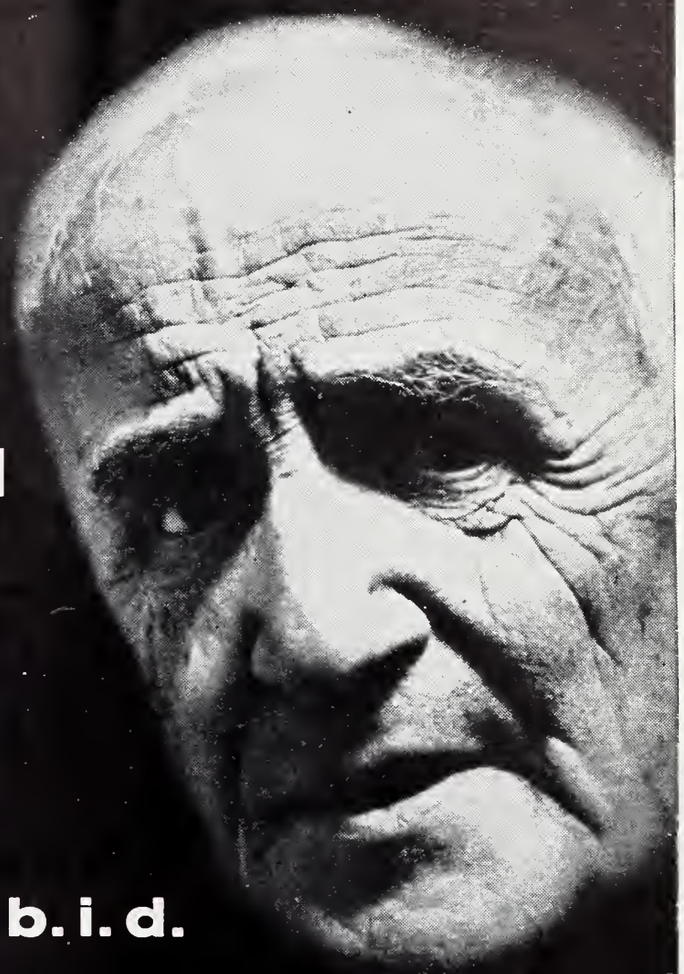
DEATHS

FOX, LEE THOMAS, Canton; M.D., University of Louisville Medical College, Louisville, Ky., 1891; retired from practice in Canton and Madison County in 1953; emeritus member of MSMA, member of Fifty Year Club; died at his home in Canton, Aug. 29, 1960, aged 90.

MCLAURIN, ROBERT TORREY, Laurel. M.D., Medical College of Virginia, Richmond, 1928; interned Richmond Memorial Hospital, Richmond, Va.; owner and operator of Laurel General Hospital; died Aug. 18, 1960, aged 59.

MCRANEY, VOSS, Ellisville; M.D., Southwestern Medical School, Dallas, Texas, 1953; interned Good Samaritan Hospital, Lexington, Ky.; U. S. Navy, three years; died Aug. 24, 1960, aged 34.

IN SENILE CONFUSION . . .



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Women See Doctors 1.6 Times More Than Men

The average American sees his doctor 4.8 times a year according to *New Medical Materia.* Dentists are seen annually 1.5 times.

Reporting a U.S. National Health Survey, the magazine said that women on the average see their doctors and dentists more often than men. The average woman sees her doctor 5.5 times a year and her dentist 1.7. Her male counterpart visits the doctor's office 3.9 times annually and the dentist 1.3.

Wisconsin Opens Medical Museum

The Wisconsin Museum of Medical Progress—the first of its kind—opened in Prairie du Chien Sept. 1. Established by the Charitable, Educational and Scientific Foundation of the State Medical Society, the unique museum will be operated by the State Historical Society.

Displays tell the story of medicine from the days of the Indian through the Civil War to the "horse and buggy doctors." Other areas covered include medical education, medical quacks, and the development of surgery.

Scheduled to be open from May through October, the museum is located at Fort Crawford—the frontier outpost where Dr. William Beaumont conducted his revolutionary experiments in the physiology of digestion. The displays are housed in the reconstructed military hospital of the second Fort Crawford.

73 Shield Plans Pay Doctors in 1959

Physicians were paid $664,301,706 in benefits by 73 Blue Shield plans in the United States and Canada in 1959, according to the National Association of Blue Shield Plans.

Of the plans' total dollar income, 89.06 per cent went to pay claims expenses, 9.84 per cent was paid out for operating expenses, and only 1.10 per cent was put into reserve funds.

By contrast, in 1947 a total of 45 plans paid out 78.24 per cent of total income in claims expenses, 15.60 per cent in operating expenses, and put 6.16 per cent into reserve funds.

Since 1946, membership has climbed from 1.9 million to 44.8 million. On each working day last year, 8,697 persons joined a Shield plan.

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sulfonylurea failures

Among those diabetics who responded to tolbutamide initially and became secondary failures **DBI "gave a satisfactory response in 55%."**[4]

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"All twelve secondary tolbutamide failures have done well on DBI."[6]

"34 out of 59 sulfonylurea primary failures were successfully treated with DBI."[7]

Gout Higher in Women Than Generally Believed

The incidence of gout in women has been found to be "considerably higher" than generally believed in a recent study. The study was based on 74 cases of gouty arthritis seen at two large Detroit hospitals, Detroit Receiving and Wayne County General, during the past four years.

Writing in the September *Archives of Internal Medicine,* published by the American Medical Association, four researchers said gout is generally considered to be a disease primarily affecting the middle-age white man.

However, they said 19 of the 74 patients were women and 45 of the 74 were Negroes.

"In our experience, gouty arthritis is a relatively common disease which can strike both Negro and white, man and woman," they concluded.

"No significant racial differences in the incidence of gout were noted when the figures were compared to statistics for hospital admissions.

"The incidence of gout in women was found to be considerably higher than is usually reported."

The authors of the article are Rachel E. Turner, M.R.C.S., L.R.P.C.; Martin J. Frank, M.D.; Dorothy Van Ausdal, M.D., and Alfred Jay Bollett, M.D.

Disaster Medical Care Conference Planned

A one and one-half day program by the Division of Health Mobilization of the U. S. Public Health Service will be a featured part of this year's County Medical Societies Conference on Disaster Medical Care.

The conference, sponsored annually by the AMA Council on National Security, will be held on Nov. 4-6, 1960, at the Palmer House in Chicago. State medical society representatives, state civil defense authorities, and other professional health and medical personnel will be briefed on the important programs being developed by the new PHS division.

On the afternoon of Nov. 5, types of disasters will be discussed. Workshop sessions will be held Sunday morning, Nov. 6, to consider specific state and local problems.

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1. Walker, R. S.: Brit. M. J. 2:405, 1959.
2. Odell, W. D., et al.: A.M.A. Arch. Int. Med. 102:520, 1958.
3. Pearlman, W.: Phenformin Symposium, Houston, Feb. 1959.
4. DeLawter, D. E., et al.: J.A.M.A. 171:1786 (Nov. 28) 1959.
5. McKendry, J. B., et al.: Canad. M. A. J. 80:773, 1959.
6. Miller, E. C.: Phenformin Symposium, Houston, Feb. 1959.
7. Krall, L. P.: Applied Therapeutics 2:137, 1960.

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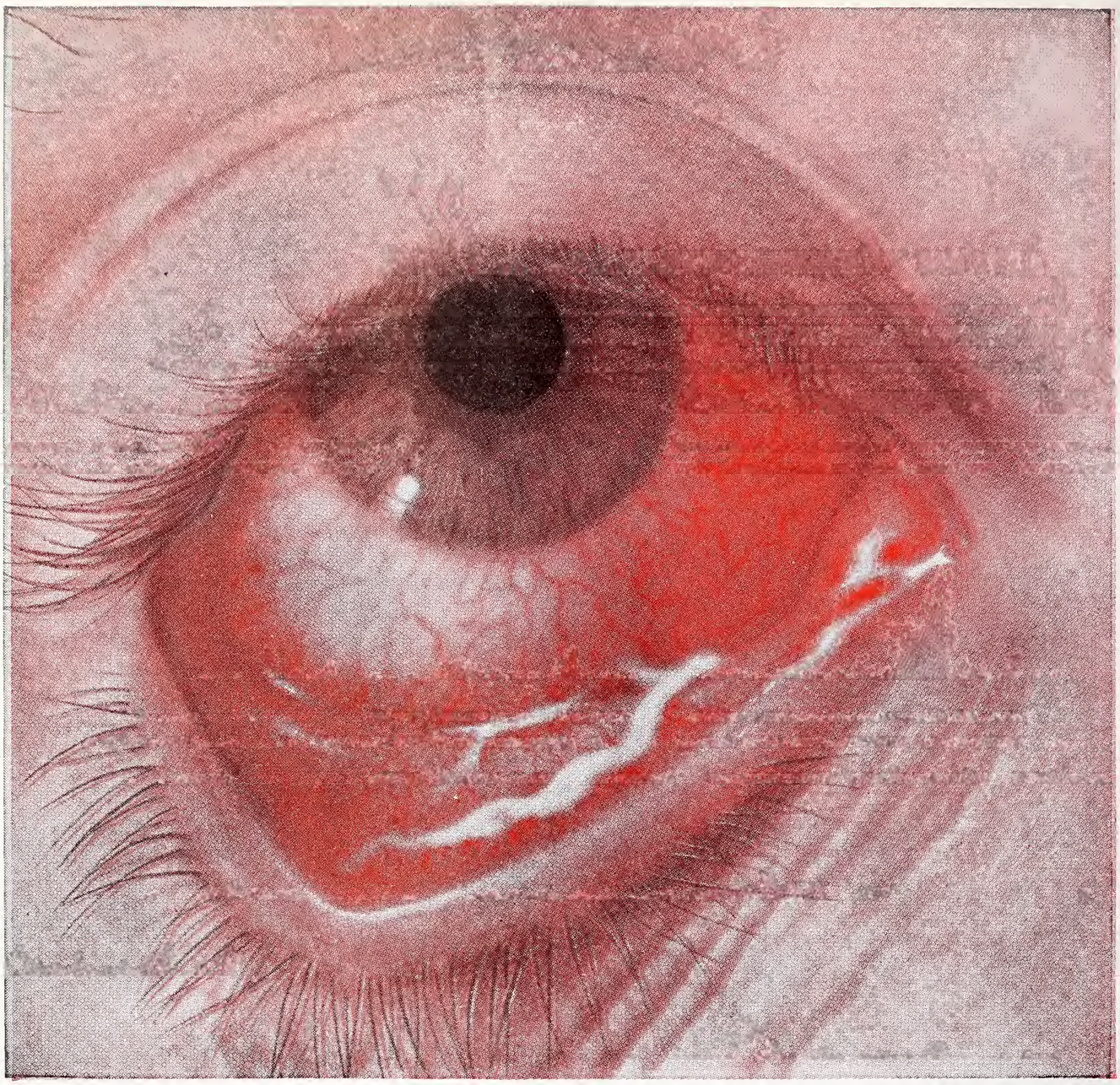

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1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957.
2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

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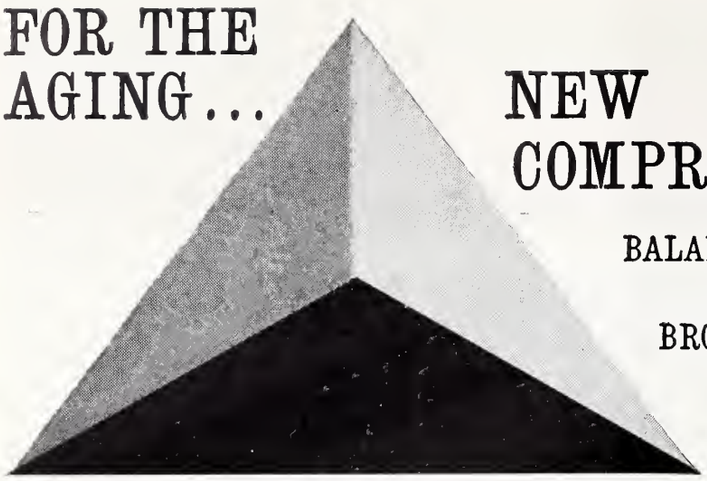
FOR THE AGING...



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THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

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Robert R. Kierland, M.D., Rochester, Minn.
Dermatology
Frank B. McGlone, M.D., Denver, Colo.
Gastroenterology
Thomas T. Jones, M.D., Durham, N. C.
General Practice
John C. Ullery, M.D., Columbus, Ohio
Gynecology
Walter Lyon Bloom, M.D., Atlanta, Ga.
Internal Medicine
Herman J. Moersch, M.D., Rochester, Minn.
Internal Medicine
William A. Sodeman, M.D., Philadelphia, Pa.
Internal Medicine
Jack A. Pritchard, M.D., Dallas, Tex.
Obstetrics
Daniel Snydacker, M.D., Chicago, Ill.
Ophthalmology
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Orthopedic Surgery
Sam E. Roberts, M.D., Kansas City, Mo.
Otolaryngology
S. E. Gould, M.D., Eloise, Mich.
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For information concerning the Assembly meeting and the tour write Secretary, Room 103, 1430 Tulane Avenue, New Orleans 12, La.

NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

November 1960

Dear Doctor:

Mississippi's Highway Safety Patrol has established a bureau of narcotics, first major move in a continuing crackdown on illicit drug traffic. T. P. Naylor, Gulfport, was named bureau chief after completing special training at U.S. Bureau of Narcotics in Washington.

> Working over last two years with State Board of Health, MSMA's Board of Trustees has delved into narcotics problem. Eventual multilateral program may include state and private agencies working together with U.S. authorities in enforcement and addict discovery.

The not-too-pleasant expression, "doctor draft," is back in medicine's vocabulary with Defense Department announcement to call up 500 physicians next year. Discontinued in 1957, draft is being reinstated for want of sufficient numbers of interns and residents entering service. First quota in March 1961 will exclude dentists.

American Association of Retired Persons is rapidly becoming one of the biggest vitamin merchants in the drugs-by-mail field. Publications to members explain "need" for vitamins, hematinics, and lipotropics, apparently encouraging self-diagnosis. Sales operation works out of Washington under D. C.'s antiquated, anything-goes pharmacy laws.

Louisiana's federal welfare finances may be in hot water with recent action of legislature to terminate aid to 22,500 illegitimate children. U.S. Office of Social Security is holding hearings on "...state's eligibility to receive further federal funds." New state law stops ADC welfare payment to mothers after birth of illegitimate child.

Two important mailings are headed toward MSMA members: New 1961 Directory of Physicians and survey materials on relative value index of prevailing professional fees. RVI study is important to all physicians and will be only as good as completed questionnaire booklets returned with information requested.

Sincerely,

Rowland B. Kennedy
Executive Secretary

State's Vital Statistics Show Slight Increase In Births

Jackson - Formal vital statistics for 1959, just released by State Board of Health, show 1,300 more live births in Mississippi than for the preceding year but still fewer than any year during 1946-1957. Total was 60,562 including 27,979 white and 32,583 non-white. Almost 99 per cent of white births were attended by a physician in a hospital while non-whites' rate was only one out of two. Despite lower inpatient care rate for non-white, hospital deliveries are up 35 per cent for this group in just five years. Maternal mortality continues to decrease with 1959 rate at 0.9 per 1,000 live births. Illegitimate births are high: 23.7 per cent (7,721) for non-whites and 1.3 per cent (370) for whites.

Texas Physicians Endow Medical Writing Scholarships

Austin - A new graduate fellowship program in medical journalism, believed the first sponsored by physicians and a major university, has been established by the Texas Medical Association and the University of Texas. An annual stipend will be paid to awardees pursuing studies in science reporting and sponsors hope to train staff writers from most city newspapers in the southwest. Fund was organized in memory of the late Miss Harriet Cunningham, TMA staff member, who handled state journal.

Scheduled Airlines Set New Safety Records

New York - It's almost safer to fly than walk, according to new data on passenger deaths on U.S. scheduled airlines. 1959 rate was a meager 0.44 per 100 million passenger miles flown, a reduction of 90 per cent in 20 years. Gains are even more impressive in view of 5,000 per cent increase in miles flown since 1939. In nearly two years of pure jet service, not a single passenger fatality has been recorded.

Home Economics Association To Organize Nutrition Council

Jackson - Groups in medicine, education, agriculture, industry, and government are being invited to form a state nutrition council under sponsorship of the Mississippi Home Economics Association. Spokesmen for MHEA say food fads are rampant, calorie overconsumption is widespread in all age groups, and that more and better health education on diet is needed.

Plastic Packaging Is Apparent Factor In Food Spoilage

Washington - Food and Drug Administration officials confirmed reports last month that airtight plastic food packaging may be a key factor in food spoilage. Two deaths in Minneapolis were traced to botulism from plastic-wrapped unsterilized smoked fish. Recent supermarket surveys show high return rate of spoiled produce sold in plastic bags. Clostridium botulinum which grows in absence of air was found in some returns.

CANCER COVERAGE

Important Benefit In Todays Health Protection

by RICHARD C. WILLIAMS

Jackson, Mississippi

Richard C. Williams
Executive Director
Mississippi
Hospital and Medical
Service
Since 1947

Mississippi's Largest Health Protection Plan

Blue Cross ®

Blue Shield ®

CANCER is a word that strikes terror to every heart. It is often a double calamity—for it may mean hospital and medical expenses running into thousands of dollars. Far more than even the generous limits of Blue Cross-Blue Shield protection.

For most, this would mean financial ruin. It would mean debt, and hardship, and doing without for years and years.

Realizing the importance to Mississippi people of having the best protection possible, the Mississippi Hospital and Medical Service in August 1952, made available to its subscribers a Catastrophic Illness Endorsement (hospital and medical protection up to $5,000.00) which included polio and nine other dread diseases. Since that time 71,000 subscribers have added this valuable protection to their regular Blue Cross-Blue Shield membership.

In January 1957 *cancer* protection was added to the Catastrophic Illness Endorsement and over 117,000 subscribers have taken advantage of this extremely important benefit.

Senior citizens (over age 65) in October 1958 were given the opportunity to add dread disease hospital and medical protection up to $2,500.00 to their membership.

Now more than 188,000 Blue Cross-Blue Shield members have added protection with the Catastrophic Illness Endorsement which was designed to replace regular Blue Cross-Blue Shield benefits for broader requirements needed when a member is stricken with one of 11 terrible and costly diseases.

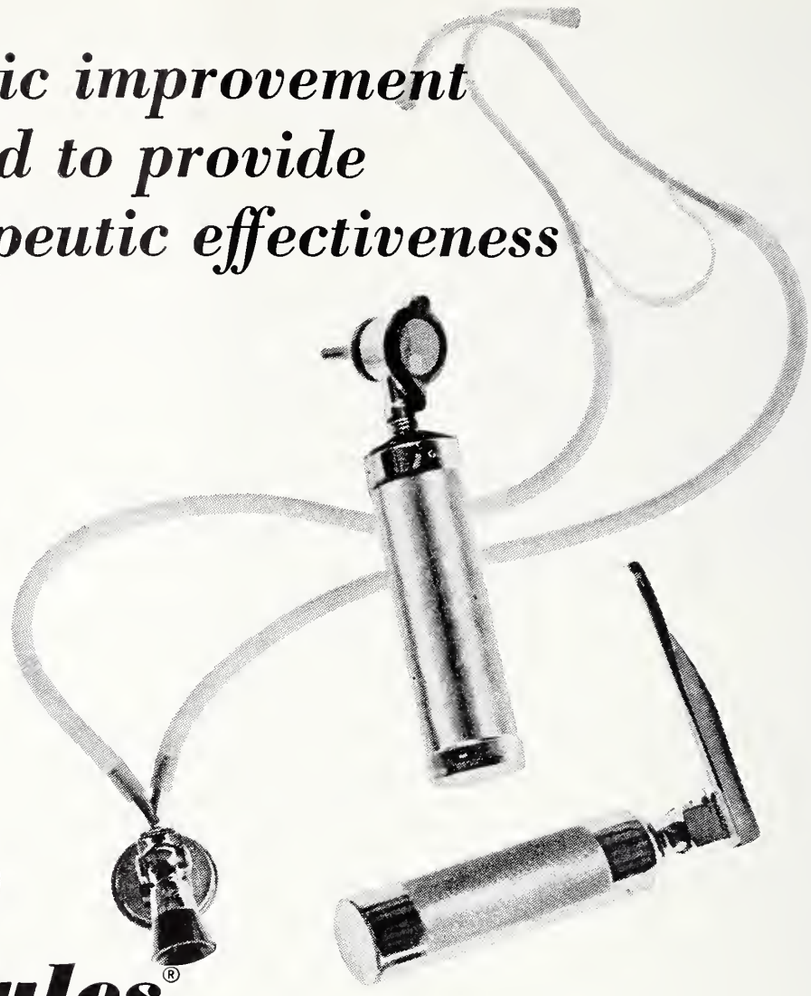
Our claims records prove that thousands of Mississippi people are thankful for the day they enrolled in Blue Cross-Blue Shield—and added C. I. E. protection.

It is suggested that Mississippi physicians urge patients to take advantage of Cancer and Catastrophic illness protection when possible—it can be added to non-group membership as well as group membership.

Mississippi physicians are also reminded that Blue Cross-Blue Shield cancer claims *must* be accompanied by pathological reports establishing the diagnosis of cancer.

Our only aim is to be of service. ★★★

an antibiotic improvement designed to provide greater therapeutic effectiveness



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in a more acid-stable form assure adequate absorption even when taken with food

Ilosone retains 97.3 percent of its antibacterial activity after exposure to gastric juice (*p*H 1.1) for forty minutes.[1] This means there is more antibiotic available for absorption—greater therapeutic activity. Clinically, too, Ilosone has been shown[2,3] to be decisively effective in a wide variety of bacterial infections—with a reassuring record of safety.[4]

Usual dosage for adults and for children over fifty pounds is 250 mg. every six hours.
Supplied in 125 and 250-mg. Pulvules and in suspension and drops.

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Practical Points in Management Of Staphylococcal Disease

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The last decade has proved that antimicrobials cannot wipe out the staphylococcus. The most effective means of control still appears to be strict adherence to aseptic practices.

The author reviews factors responsible for outbreaks of staphylococcal disease in hospitals and the principles of their control. He points out that antibiotic resistant organisms do not appear to have been disseminated widely from hospitals to the community at large. He concludes that prophylactic antibiotic usage should be discouraged on the whole since such practices in the past may have led to today's drug resistant strains of Staphylococcus aureus.

INFECTIONS CAUSED by drug resistant strains of *Staphylococcus aureus* acquired within hospitals represent a newly recognized serious health hazard. Major outbreaks of staphylococcal disease in the past, before the era of antimicrobials, were most prevalent during times of crowding and overtaxing of hospital facilities. Likewise, the seasons seemed to influence such infections since the highest incidence was during the winter months, a time when respiratory infections were of greatest frequency (Chart 1). Other than these factors, however, staphylococcal disease could best be related to failures in observing isolation and aseptic techniques by hospital personnel. Local outbreaks of infection could usually be attributed to a relaxation of such practices; their enforcement usually eradicated the problem.

During the last decade, the propensity for the staphylococcus to thrive within hospitals has proved vexing since it had been hoped that the availability and widespread use of antimicrobials would eliminate forever risk of infection by these as well as other organisms. Despite recent reductions of morbidity and mortality rates associated with certain of the classical contagious diseases, we now know these hopes were ill-founded in view of the rapid emergence and predominance of staphylococcal strains that have proved not only drug resistant but also fully capable of producing disease.[1] Although the problems created by staphylococcal infections have been minimized by some, others have felt that their prevalence represents not only a real hazard to hospitalized patients, but also poses the serious risk of dissemination to community populations.[2, 3]

With reference to the last point, there has been little evidence to suggest serious or widespread distribution of drug-resistant strains of staphylococcus to the outside. To cite one experience, only 5 per cent of patients infected at the time of discharge from the hospital passed the organism to members

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of their immediate family.[4] Satellite cases were commonly found within the home, but dissemination to other families was not noted often. Despite wide prevalence of coagulase positive staphylococci within the nasopharynx of the normal population, a high degree of natural immunity seemingly prevents epidemics of major infection.

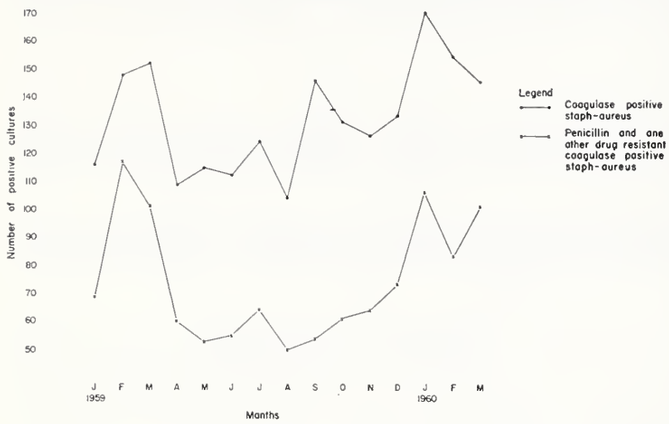

Chart I. Chart showing monthly isolates of Staphylococcus aureus from wards and clinics of the University Hospital from January 1959, through March 1960. Note high number of positive cultures during winter months. Antibiotic resistant isolates varied directly with total incidence.

Considerable reassurance in this regard can be gained from studies conducted by Grogan and Artz of the University of Mississippi School of Medicine wherein little evidence was found that the strain of *Staphylococcus aureus* responsible for most hospital infections, phage type 80/81, had spread to the population of Jackson and Hinds County. Specifically, coagulase positive staphylococci were found in the nasopharynx of 37 per cent of 1,640 well individuals, a figure in keeping with other communities, but only 1.5 per cent of these cultures were phage type 80/81. This was so in spite of the endemicity of these organisms within the four major hospitals of this community and a 53 per cent carrier rate of type 80/81 in 150 cultures obtained from hospital personnel at the time of the study.[5] Penicillin resistant staphylococci, mostly of other phage types, were found in approximately 29 per cent of cultures from the community. Even so, this incidence was less than the 55 per cent rate found for hospital personnel.

COMMUNITY INCIDENCE

In contrast to hospitals, staphylococcal infections develop sporadically rather than in epidemic form in the community; however, incidence once again is highest during the cold months. Mild disease such as recurrent furunculosis and impetigo, particularly in children, may be perennial in occurrence and often seems chiefly an autogenous infection. Although this form of staphylococcal infection is an exceptional cause of life threatening disease, appreciable morbidity does occur. More serious sporadic cases of osteomyelitis with hematogenous dissemination can usually be related to preexisting furunculosis. More serious infection, however, such as staphylococcal pneumonia follows in the wake of epidemic viral respiratory disease, such as influenza, and a significant mortality may be expected. Fortunately, widespread disease of this sort is infrequent.

From this brief introduction, it is apparent that the overall problem of control falls into two major categories and can best be discussed by contrasting hospital acquired infections with the problem of staphylococcal disease in ambulatory patients.

HOSPITAL STAPHYLOCOCCAL INFECTIONS

As a result of extensive epidemiological study of staphylococcal outbreaks, certain common facts concerning hospital infections have emerged. These have been summarized in Table I and, as shall be apparent shortly, do not represent radically new concepts for the control of contagious diseases. Coinciding with the high incidence of patient infection, a high nasopharyngeal carrier rate of the phage type of staphylococcus responsible for the outbreak has been found among hospital personnel.[5] Perhaps of even greater importance during this time has been the more frequent occurrence of staphylococcal infection in the form of furunculosis among hospital personnel. The relative importance of nasal carriers as contrasted to personnel with skin infections in perpetuating hospital epidemics is not known. Since presence of the organism in either instance increases likelihood of patient infection, both deserve careful consideration. Even so, the carrier represents a special problem since no effective means for permanent elimination of the condition has been found. On the other hand, since evidence indicates that both patient and personnel with open staphylococcal disease represent dangerous sources for spread to others, positive steps for control of seemingly mild furunculosis should be instigated.[6]

A factor not widely recognized but of undoubted importance in the genesis of today's hospital staphylococcal disease concerns the type of patient population responsible for most bed occupancy (Table I). Elderly patients with degenerative diseases such as diabetes mellitus, pulmonary emphysema, cerebral vascular occlusion, and renal insufficiency comprise a large segment of this group. Likewise, advances in techniques of

anesthesia and surgical procedure have resulted in the extension of operative treatment to patients previously classified as either inoperable or as poor risks. Consequently, extensive and prolonged procedures, sometimes associated with hypotension and anoxia, have resulted in conditions conducive to infection. It is of interest that prophylactic antibiotics have not solved this problem in the clean elective procedure yet there can be no doubt that antimicrobials have greatly advanced management of either dirty or potentially contaminated wounds.[7] Finally, advances in treatment of neoplastic diseases such as leukemia and other chronic debilitating illnesses, particularly those requiring adrenal steroid therapy, have resulted in a group of patients highly susceptible to staphylococcal infection. It must be remembered that these patients are prone to infection by all bacteria and should, therefore, while hospitalized be managed with especial care to minimize chances for development of staphylococcal infection.

The rapid expansion of modern hospital facilities has in some areas exceeded the supply of fully trained personnel capable of establishing and maintaining the procedures required for satisfactory asepsis. Unrecognized but serious breaks in technique under such circumstances by professional, nursing, and housekeeping services have been observed to account for enhanced infection rates. When in doubt, inexperienced personnel should be encouraged to seek advice from sources skilled in the problem at hand. In the same vein, many hospital attendants under such circumstances have been completely unaware of the dangers posed by contagious diseases since there has been no concerted effort to effect satisfactory educational programs.

TABLE I

FACTORS CONTRIBUTING TO HOSPITAL OUTBREAKS OF INFECTION DUE TO *STAPHYLOCOCCUS AUREUS*

I. Increased susceptible patient population
   A. Extremes of age
   B. Chronic debilitating diseases, e.g. heart failure
   C. Metabolic diseases
      1. Diabetes mellitus
      2. Iatrogenic, i.e. steroid therapy
   D. Neoplastic diseases
      1. Lymphomas
      2. Antimetabolite therapy
   E. Postoperative patients
      1. Nutritional problems

II. Lack of staff educational program

III. Inadequate isolation procedure
   A. Failure to comprehend danger of infections
   B. Prevalence of infection in staff
   C. Poor concept of epidemiological aspects of hospital infections

IV. Inadequate techniques for asepsis and sanitation
   A. Faulty sterilization equipment
   B. Inadequate housekeeping practices
      1. Floor cleaning procedure
      2. Cleaning contaminated equipment
      3. Handling of contaminated laundry
   C. Improperly designed air conditioning and filtration equipment

V. Improper antibiotic usage
   A. Prophylaxis when not indicated
   B. Inadequate dosage

DRUG RESISTANT RESIDUE

As noted in the introductory remarks, the widespread use of antimicrobials has resulted in the elimination of sensitive bacterial strains and left a staphylococcal residue that is largely drug resistant. Not only is this fact to be regretted, but from evidence now at hand antibiotic usage may increase the likelihood of the recipient becoming colonized by a staphylococcus strain indigenous to hospitals. For instance, studies by Knight[8] and more recently by Berntsen[9] indicated that patients treated with either penicillin or broad spectrum antibiotics became nasal carriers of drug resistant staphylococci more readily than untreated patients. Apparently, the normal respiratory flora was eradicated leaving a clear field for nasopharyngeal occupation by the drug-resistant staphylococcus. Such patients have been shown to be more apt to develop complicating staphylococcal disease rather than those not treated.[10, 11] Data of this sort must give the physician cause to consider carefully the advantages to be gained by antimicrobial therapy as contrasted with the complications these agents may lead to.

GENERAL RULES

As outlined in Table II, hospital staphylococcal outbreaks may best be brought under control by the following general rules. First the problem must be recognized by all concerned. This means that doctors of the hospital staff must face the situation squarely and honestly. Unfortunately, there is a tendency for physicians to minimize conditions that may be potentially dangerous in their own locality and to think that staphylococcal outbreaks will not occur. This unrealistic attitude has been known to prevail even in the face of florid epidemic conditions and has made control extremely difficult. Both the American Medical Association and the American Hospital Association have recommended activation of an infection committee to aid in determining policy for control of communi-

cable diseases. Without a group of this sort it is difficult to achieve realistic appraisal of conditions prevalent on the hospital wards. It is necessary, therefore, that each physician cooperate closely with this group. Furthermore, an awareness of the potential hazards of an impending staphylococcal outbreak must be grasped before realistic and practical management of contagious diseases in hospitals can be attained.

CONTINUING PROGRAM

In the same area, a continuing program of education should be developed for nursing, administrative, and service personnel. By this route, the desirability for adherence to routines of strict hygiene and asepsis as a means for minimizing the risks attending infectious diseases can be emphasized. Attendants at all levels must be aware not only of the personal danger of staphylococcal infection but realize that they may act as a carrier or vector for spreading infection.

As of this time, there is no satisfactory method for dealing with personnel known to be nasopharyngeal carriers of a "hospital" staphylococcus. Local or systemic administration of antibiotics may clear the condition temporarily but the tendency for recurrence complicates disposition. When known persistent carriers occupy critical positions, transfer to less sensitive areas may be a justifiable solution. Detection of carriers poses a sizable epidemiological problem and should not be undertaken lightly. Expert help in the form of consultation and perhaps survey work as indicated may be obtained from the State Board of Health.

SELF-REPORTING

It may seem trite to emphasize, but personnel with staphylococcal infection, no matter how mild, should not be allowed on scene until completely recovered. An appreciation of this concept and its significance at every level is fundamental for a coordinated and successful effort in maintaining the highest hospital conditions. Since a plan for daily inspection of all attendants is rarely possible, it is apparent that each individual must share the responsibility in self-reporting. Only in this way can effective control be attained.

The reader is referred to standard references for a detailed and definitive coverage of sterilization procedure. Of particular importance is the reliability of sterilization equipment since faulty function may be responsible for major breaks in asepsis.

Strict isolation technique must be advocated for limiting staphylococcal disease. This procedure above all others has stood the test of time as a useful means for interrupting spread of infections. As stressed before, patients with active staphylococcal infection represent the greatest and most dangerous source for dissemination. It is probable that in the absence of adequate isolation most spread from patients occurs via contact with both professional and allied personnel. Accordingly, it is inexcusable for such cases to be maintained on open wards. Maintenance of adequate isolation for single patients in multiple areas is difficult in view of the many individuals involved. For this reason, the use of group isolation, as discussed in the next paragraph, has been advocated.

The establishment of isolation or contagion wards for patients with staphylococcal infection has proved useful when control by other means

TABLE II

SUGGESTED STEPS FOR CONTROL OF HOSPITAL OUTBREAKS DUE TO *STAPHYLOCOCCUS AUREUS*

I. Establishment of a militant infectious disease committee interested in control of hospital infections

II. Recognition and acceptance of problem, especially by the staff physicians

III. Designing of educational program to reach attendants at all levels with emphasis as to:
   A. Recognition of disease and dangers
   B. Mechanisms of spread
   C. Responsibility of all to report minor skin infections
   D. Treatment of attendants with infection before their return to patient care
   E. Treatment or transfer of carriers found in critical position

IV. Establishment of a rigid and adequate isolation procedure
   A. Sequestration of patients with infection to one area or ward
   B. Emphasis on hand washing

V. Reappraisal of housekeeping and maintenance routines with reference to:
   A. Sound housekeeping practices
   B. Adequate germicidal solutions
   C. Sanitary handling of food
   D. Laundry management
   E. Safety of air conditioning equipment

VI. Discharging of potentially susceptible patients at earliest possible date

VII. Emphasizing of proper antibiotic usage
   A. Discouragement of routine prophylaxis
   B. Restriction of needless use of agents effective against staphylococcal infections

failed. Much can be said in favor of this practice since the concentration of patients into one area limits contact to a small and select group of hospital personnel and thereby reduces chance for spread. In this way, cross infection from patient via personnel can be sharply reduced.

PROPER DECONTAMINATION

Since proper decontamination of equipment, rooms, and fomites exposed to patients with infection is an integral part of communicable disease control, it behooves each hospital to maintain rigid supervision of housekeeping techniques. In this regard, dangers inherent in certain types of cleaning equipment, procedures for handling laundry, and improperly designed air conditioning and air filtration equipment have been pointed out. When in doubt, a return to proved procedure may be required to contain epidemic conditions until new techniques and apparatus have been evaluated and proved safe. The efficacy of ultraviolet light as a safe means for sterilization has been recently reemphasized by Hart, especially in regard to surgical areas and perhaps other facilities subject to heavy contamination.[12]

The control of epidemic staphylococcal infections in newborn nurseries is a special one and has been covered in the literature.[13, 14] For the most part, outbreaks developed after nursery techniques had either deteriorated or facilities had become inadequate to handle the patient load. Segregation of babies, rooming in, prophylactic drugs, and early discharge have each provided help in some instances.

A determined effort should be made to insure the critical utilization of antibiotics by staff physicians since previous and in some cases extravagant usage has undoubtedly fostered our current predicament with drug resistant staphylococci and other microorganisms. Prophylactic antimicrobial therapy should be discouraged as a routine procedure and limited to clear-cut indications for need since its use may increase the likelihood of acquiring a resistant bacterial infection. Of these, that due to *Staphylococcus aureus* is a frightening example.

CLINICAL STUDIES

The dubious reader is referred to several careful clinical studies in this area concerning patients with either surgical or medical disorders.[15, 16] Although not widely adopted, plans for restricted use of antibiotics have been instigated in some hospitals in the effort to preserve effectiveness of the newer antimicrobial agents. Recent evaluation of a program of this type in an English hospital revealed, after some 12 months, that there was a gradual fall in both the incidence of serious infections and in the number of cultures for *Staphylococcus aureus* that were resistant to penicillin.[17] There is little doubt that such practice in the University Hospital has prolonged the usefulness of the more recently developed drugs. It should be pointed out that the voluntarily limited use of chloramphenicol appeared to preserve it as a useful drug for several years longer than other agents released at about the same time. However, in recent months as chloramphenicol has been used more freely, a rise in the incidence of infections due to resistant organisms has been noted.

RESTRICTION OF DRUGS

Hospitals with a small professional group can usually accomplish restriction of drugs on a voluntary basis with no need for central regulation. In larger institutions, however, it may be helpful to establish a regulatory policy concerning antimicrobial utilization in order to preserve their effectiveness. It is desirable that this type of arrangement be so contrived as to not deprive patients the benefit of either a desirable or indicated drug.

So long as staff morale and interest are kept at high levels, vigorous adherence to these simple principles can be effective in holding staphylococcal infections within reasonable limits. To do such requires unflagging vigilance, particularly by the physician who in the final analysis must bear the responsibility for the standards established to prevent spread of nosocomial infections.

RECURRENT INFECTIONS IN AMBULATORY PATIENTS

Recurrent furunculosis in healthy children and adults often proves a seemingly insoluble problem. It has spawned many forms of therapy; none of which have become noted for their infallibility. Before attempting to outline certain principles that may aid in therapy, it will be worthwhile to consider a few fundamentals concerning the pathogenesis of this type of staphylococcal infection.

In experiments involving human volunteers, it was shown by Elek[18] that an inoculum of at least 100,000 viable staphylococci was required to consistently infect healthy human subcutaneous tissue. The introduction of a foreign body, however, in the form of a surgical suture, sharply reduced the quantity of bacteria required for suppuration. From evidence of this sort, a large inoculum of a staphylococcus of known virulence appears a prerequisite for autogenous reinfection to become

a problem. Purulent drainage from the patient's own lesions satisfied this requirement since a single drop of pus may contain millions of viable microorganisms. By contact with fomites and from the patient's fingers, bacteria in sufficient number may be introduced into a break of skin continuity and thereby establish a new site of infection. It is rare in this instance for new lesions to result by way of the blood stream.

DRAINING LESIONS

When draining lesions are present, the entire body surface probably becomes covered with a thin layer of staphylococci capable of producing secondary sites of infection. Since the generation time of staphylococcus is short, daily bathing results in only a transient reduction of the skin content. Prompt proliferation undoubtedly restores the bacterial count to high levels within a few hours after bathing. From such a fertile source, staphylococci shed into patient's immediate environment lead to its saturation and thus a secondary source of viable organisms for reinfection. With these facts in mind, it is possible to devise a practical program[19] for control of recurrent skin infections (Table III).

PRACTICAL PROGRAM

First the patient should be schooled in a program designed to control the infection. Systemic antibiotics are required infrequently and routine use is discouraged. However, in the event of such constitutional symptoms as fever and lymphadenitis, or if the lesion is so located as to constitute a life threatening situation, antibiotics should be used. Adequate drainage either spontaneous or induced is always desired and should be the immediate object of therapy. This can usually be hastened with warm compresses followed by surgical incision when both localization and fluctuation have been achieved. Hot compresses should be continued even after drainage since the induced vasodilatation speeds healing.

After each application of compresses, the skin surrounding the abscess should be cleansed with 70 per cent alcohol by employing a circular motion moving from the periphery centrifugally inward to the edge of the lesion. An ointment containing either neomycin or bacitracin should next be applied to the skin to prevent satellite lesions and facilitate healing. For protection of clothes, a clean absorbent gauze cover secured firmly in place should minimize spread of infectious material but does not guarantee against it. Cellulose tape rather than adhesive tape is usually desirable since the latter may irritate skin and thus set the stage for local spread.

In conjunction with these measures for controlling local lesions, the patient should attempt to keep the skin staphylococcal count at low levels by bathing several times daily. Assuming a staphylococcus divides every thirty minutes, a high skin count may be expected within eight to ten hours. Accordingly, bathing by shower at least every six hours or four times daily should keep the skin relatively clean. A germicidal soap for bathing and hand washing is recommended. Following each shower a complete change of clothes is advised with the dirty clothes promptly washed as

TABLE III

PRACTICAL POINTS FOR CONTROL OF RECURRENT FURUNCULOSIS DUE TO *STAPHYLOCOCCUS AUREUS* IN HEALTHY PATIENTS

I. Treatment of lesion
   A. Facilitate drainage
   B. Apply compress four to six times daily until healed
   C. Cleanse skin after compresses with 70 per cent alcohol
   D. Apply topical antibiotic to skin and lesion (bacitracin, neomycin)
   E. Cover with absorbent dressing
   F. Use cellulose or plastic rather than adhesive tape
   G. Do not use systemic antibiotics unless infection severe or in dangerous location

II. Reduction of incidence of reinfection
   A. Cleanse total body surface three to four times daily by shower using germicidal soap
   B. Change clothes after each bath
   C. Eliminate bacteria from environment
      1. Launder clothes in germicide and hot water
      2. Have other garments either dry cleaned or exposed to sun
      3. Cover mattress and pillows with plastic (clean daily with germicide)
      4. Launder bedding and night clothes daily
      5. Clean other areas used frequently with germicide
   D. Avoid irritants, allergens, or anything capable of breaking skin surface during time furuncle draining

III. Continuation of program two weeks after lesions cleared

IV. Reassurance

V. Vaccines and toxoids of no proved value

VI. Gamma globulin not indicated

outlined below. Adherence to a routine such as this is desired for several weeks after control of infection since a low skin content of staphylococcus minimizes risk of new infection. When the infection has involved several members of a family, the above program should be enlarged and designed to encompass the entire group since "ping-pong" infections may prolong the duration of family outbreaks. With a regimen of this variety, success can be anticipated in the majority of instances.

RESULTS

Such a program may seem unduly complicated but, in actuality, presents a very simple and exact means of insuring good personal hygiene. When carefully explained with emphasis on patient understanding and participation, a good result may be assured in most instances. Failures usually reflect a break in routine or improper instruction.

A determined effort must be made to either eliminate or materially reduce the number of staphylococci contained in the fomites and immediate environment of the patient. For example, the mattress and pillows should be covered with a plastic cover. In this way, they may be cleaned with a germicidal solution after each night of sleep. All bedclothes, including pajamas, should be washed in a similar manner after each wearing. Outer garments that cannot be washed should be either dry cleaned or exposed to sunlight to bring about sterilization. Other areas about the home known to be contaminated such as bathrooms should be regularly sterilized with germicidal solutions.

Commercial staphylococcal toxoids and vaccines as well as autogenous vaccines have not been established on a scientific basis as worthwhile therapeutic adjuncts although they continue to enjoy popularity in some areas.[20] Likewise, gamma globulin administration to patients with normal antibody levels cannot be justified for there is no evidence of material help in the control of staphylococcal disease.

SUMMARY

Factors responsible for outbreaks of staphylococcal disease in hospitals have been reviewed and the principles required for their containment and control outlined. Our best evidence suggests that the most effective means available for fighting these infections continues to be a strict adherence to aseptic practices already proved suitable for control of contagious diseases. It was pointed out that there is little evidence that antibiotic resistant organisms have been disseminated widely from hospitals to the community at large. Prophylactic antibiotic usage should be discouraged and deplored except in instances of real need since such practice in past years may be largely responsible for the problems now caused by drug resistant strains of *Staphylococcus aureus*.

Certain points relating to the pathogenesis of staphylococcal infections were discussed with particular emphasis directed to aspects pertaining to therapy. A regimen for managing staphylococcal lesions in ambulatory patients was briefly reviewed. Such infections can usually be managed satisfactorily without resorting to antimicrobial agents.

Finally, it was emphasized that medical control of this problem can only be achieved by an enlightened profession not only familiar with but willing to implement the established techniques and principles required for control of contagious diseases. ★★★

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Frigidity Now in TV Spotlight

Last month marked a small but significant television milestone. TV, up to now the most conservative medium as far as sex is concerned, tackled the seemingly widespread and certainly widely discussed problem of frigidity in women.

The program, entitled "The Cold Woman" (NBC-TV, Oct. 14), dealt candidly with sexual and emotional frigidity, with information about actual case histories based on tape-recorded interviews, transcripts of counseling sessions, and consultations with leading authorities in marital and personal counseling. The dramatized case-study concerned a woman who recognizes after counseling that her coldness is not a physical problem, but a reflection of her attitudes toward life.

In reporting the program, *Insider's Newsletter* questioned national authorities on just how common is frigidity. They found:

. . . The Institute of Family Relations in Los Angeles lists sexual maladjustment as the leading cause of marital discord. One study of 500 consecutive unsuccessful marriages found all but one placed the blame on sex.

. . . Dr. R. L. Dickinson in his book "Medical Analysis of a Thousand Marriages" states that 40 per cent of women never attain sexual fulfillment."

. . . Studies made at the Margaret Sanger Research Bureau revealed that at least 25 per cent of all wives have some difficulty in their sexual responses.

. . . George Lefferts, author of "The Cold Woman," worked on the show in conjunction with Dr. Lena Levine, a psychiatrist and past president of the American Association of Marriage Counselors. Their conclusion as told to the TV audience by the show's narrator, news commentator Pauline Frederick: "Frigidity is the most epidemic sickness in our society."

Differential Diagnosis of Diverticulitis Of the Sigmoid Colon From Carcinoma

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Differentiation of diverticulitis from carcinoma of the sigmoid is frequently difficult and occasionally impossible short of the pathological specimen. Incidence, symptoms, and diagnostic examinations are discussed.

THE DIFFERENTIAL DIAGNOSIS of diverticulitis of the sigmoid colon from carcinoma is a common problem. As the number of older persons increases, it will be encountered more frequently. Both carcinoma and diverticulitis have a higher incidence among the aged.

INCIDENCE

Diverticulosis occurs most frequently in the sigmoid colon. It has been stated that 3 per cent of the total population have diverticula of the colon; in persons over 40 years of age, 5 per cent to 10 per cent. Welch, Allen, and Donaldson[1] reported an increasing incidence of diverticulosis with age. At 35 years of age, diverticulosis was rare, but the condition could be demonstrated in approximately two-thirds of persons 85 years of age. The incidence curve of diverticulitis did not parallel diverticulosis but showed a steady rise with age and ascended abruptly in older age groups. At 60 years of age one-fifth of the patients having diverticulosis had diverticulitis; at 80 years one-third had diverticulitis.

Carcinoma of the sigmoid occurs frequently. About two-thirds of cancers of the colon occur in the left colon. From 85 to 90 per cent of carcinomas of the colon occur in people over 40 years of age.

Carcinoma and diverticulosis occur with slightly more frequency in the male than female, but diverticulitis and its complications occur two-and-a-half times more frequently in men.

Obesity is twice as common in patients with diverticulitis as in those with carcinoma of the sigmoid. An obese male past 50 years of age whose occupation is sedentary is the ideal candidate for diverticulitis.

Read before the 73rd Semi-Annual Meeting, Delta Medical Society, Cleveland, April 13, 1960.

Ponka, Fox, and Brush[2] found that in 355 patients with carcinoma of the colon, exclusive of the rectum, 21 per cent had both diverticula and carcinoma. Of this group both lesions were located in the sigmoid. In another study these same authors found an incidence of diverticula in 10 per cent of patients with proven carcinoma of the sigmoid. They emphasize the danger of overlooking carcinoma while treating obvious diverticulitis.

SYMPTOMS

The symptoms of diverticulitis and carcinoma of the sigmoid are usually different, but often the symptoms are misleading. Change in bowel habit, bleeding, pain, and weight loss are the most important symptoms. In diverticulitis the change in bowel habit, constipation and/or diarrhea has usually persisted over a long period of time. The symptoms caused by carcinoma tend to be progressive while those of diverticulitis may be intermittent. This is as expected, as carcinoma of the sigmoid is usually annular and constricting.

BLEEDING

Bleeding from the rectum is a complaint never to be taken lightly. Patient's interpretation of the cause, the amount, and frequency of bleeding is often misleading, confusing, and undependable. How often do doctors hear the statement, "I passed a little blood from my hemorrhoids last

week," only to find a hematocrit of 26 per cent and a lesion of the lower bowel? Then there is the timid soul who replies, "I never look at the stool." Bleeding is more common in cases of carcinoma of the sigmoid than in diverticulitis. Bleeding from diverticulitis is usually not severe but occasionally can be exsanguinating. In cases of diverticulitis the bleeding is usually intermittent; whereas, in carcinoma it is usually a day-to-day occurrence.

The incidence of bleeding in diverticulitis has been reported varying from 7.4 per cent to nearly 50 per cent. LeRoyer and White[3] report a 16.5 per cent incidence of bleeding in diverticulitis. Young and Young[4] found bleeding in 26 per cent of their patients with diverticulitis. Bleeding occurs roughly five times more often in carcinoma of the sigmoid than in diverticulitis.

PAIN

Pain is a common symptom of diverticulitis due to the inflammatory nature of the disease. The pain is likely to be recurrent and is usually in the left lower quadrant of the abdomen but may be in the right lower quadrant in cases of tortuous sigmoid, or generalized, depending upon the extent of the inflammatory process. It is to be remembered, however, that a carcinoma of the sigmoid may perforate and give symptoms and clinical findings suggesting diverticulitis.

Weight loss is more common in carcinoma of the sigmoid than in diverticulitis. Ponka *et al.*[2] report weight loss in 50 per cent of patients with carcinoma of the sigmoid and 17 per cent in those with diverticulitis.

SIGNS AND FINDINGS

Tenderness in the left lower abdomen is usually present in diverticulitis. Rigidity may be present depending upon the extent of the inflammation. Fallis and Marshall[5] report muscle spasm and tenderness were present in 50 per cent of the cases of acute diverticulitis. Tenderness may occur in cases of carcinoma but rarely.

Fever and leucocytosis is found in approximately 75 per cent of cases of diverticulitis. Temperature ranging from 98.8° to 104° F. and white blood count from 10,000 to 20,000 cu. mm. is usually found in diverticulitis.

The finding of a palpable mass by the patient or examiner is infrequent in both diverticulitis and carcinoma. The tenderness combined with muscle spasm and obesity prevents effective abdominal palpation is cases of diverticulitis. In Colcock and Sass's[6] series a mass could be palpated through the abdominal wall or felt rectally in 12 per cent of the cases of diverticulitis.

Symptoms and signs of intestinal obstruction (vomiting, pain, abdominal distention, and change in bowel sounds) are more frequent in cases of carcinoma. Ileus is more common in cases of diverticulitis. The ileus may be due to inflammation with small bowel involvement or to some complication such as fistula, perforation, or abscess formation. Complete unrelieved obstruction strongly suggests carcinoma.

SIGMOIDOSCOPIC EXAMINATION

Sigmoidoscopic examination is often not helpful in differential diagnosis of carcinoma and diverticulitis of the sigmoid colon. In cases of diverticulitis it may be necessary to defer the sigmoidoscopic examination until the height of the attack has subsided. The finding of edema and spasm on proctoscopic examination is suggestive of diverticulitis but rarely can the definite diagnosis be made. It is possible on proctoscopic examination to overlook a carcinoma as low as the rectosigmoid due to fixation and angulation. In a study of 50 cases of carcinoma and an equal number of cases of diverticulitis by Colcock and Sass[6] the proctoscopic examination was negative in all patients with carcinoma, and suggestive evidence was found in 14 per cent of the patients with diverticulitis. On the other hand Pemberton *et al.*[7] found suggestive evidence of diverticulitis on sigmoidoscopic examination in 63 per cent of the cases, and one or more diverticula were seen in 14 per cent.

X-RAY EXAMINATION

X-ray examination by means of barium enema and air contrast is a most valuable means of diagnosing diverticulitis and carcinoma of the sigmoid. Without positive x-ray evidence the diagnosis of diverticulosis is unwarranted. The percentage of accuracy of diagnosis by x-ray examination varies in reported studies from 66 per cent to 79 per cent.

Cytologic examination of material obtained through the proctoscope by swabbing the lesion or examination of rectal washings may be useful in diagnosing lesions of the sigmoid.

Wiseman *et al.*[8] reported the smear method of examination for malignancies of the sigmoid and rectum to compare favorably with x-ray examination and sigmoidoscopy with biopsy. In their series sigmoidoscopic examination was accurate in 67 per cent of the cases, x-ray examination in 79 per cent, and cytologic study of smears in 76 per cent.

With the abdomen opened and the lesion carefully palpated and inspected, the surgeon may be unable to differentiate diverticulitis from carci-

noma. Pemberton *et al.*[7] reported that in nearly 25 per cent of all specimens resected for diverticulitis, a definite diagnosis could not be made until the specimen was opened by the pathologist.

SUMMARY

Carcinoma and diverticulitis of the sigmoid colon are not uncommon lesions and often are difficult to distinguish. Both conditions occur in the same age group.

There is no marked difference in the incidence of diverticulosis and carcinoma in the male and female, but diverticulitis is more frequent in the male. Diverticulitis and carcinoma of the sigmoid colon often occur together.

The two conditions have similar symptoms, signs, and findings. Bleeding (especially of daily occurrence), progressive constipation, obstruction, and weight loss are more common in cases of carcinoma. Pain, especially recurrent and intermittent, and constipation are more common symptoms in cases of diverticulitis. The findings of tenderness, leucocytosis, fever, and ileus suggest diverticulitis; whereas, the findings of a palpable mass and anemia suggest carcinoma.

Sigmoidoscopic examination is of definite value in establishing the diagnosis of carcinoma but of little value in diverticulitis. Barium enema examination is valuable in establishing the diagnosis of both diverticulitis and carcinoma. Cytologic examination of smear or washings is a valuable method of diagnosis.

In some cases even with the history, physical findings, proctoscopic examination, x-ray examination, and examination at operation, a definite diagnosis of diverticulitis from carcinoma of the sigmoid colon cannot be made. ★★★

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THE VACATION: AN ALL-AMERICAN HOAX

A New York travel agency has just proven what everyone suspected all along: the average American worker spends 50 weeks out of a year recovering from his two week vacation. A just-completed survey of 2,000 persons by the agency shows 77 per cent select vacation routines that match work environments. Examples: Traveling salesmen vacation with auto trips. Eighty-two per cent of executives fly to a large city and stay at a commercial hotel. Secretaries used to job regimentation go to resorts that offer breakfast at 9, tennis at 10, swimming at 11. (Reported in *Insider's Newsletter.*)

Anesthesia in the Emergency Room

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Emergency care of injuries often requires an anesthetic. The author discusses indications for local and general anesthetics and typical responses. Emphasis is placed on the anticipation of complications and the availability of equipment and drugs.

ALTHOUGH EMERGENCY CARE of injuries ordinarily demands local anesthetic drugs and techniques, it may at times be necessary to administer a general anesthetic and to cope with complications peculiar to anesthetized patients. This paper will consider a number of factors in the overall problem of providing anesthesia on an emergency basis.

SURGICAL PROCEDURES

Emergency room procedures requiring some form of anesthetic include those of surgical and medical nature. The surgical entities constitute the majority of the cases requiring anesthesia and, as mentioned previously, local anesthesia is generally preferred. The repair of lacerations and closed reductions of simple fractures or dislocations are often performed in the emergency room utilizing local infiltration or peripheral nerve block techniques. Biopsies and excisions of small lesions may also be performed here using similar anesthetic techniques. Since these procedures are commonplace and all too often are considered absolutely safe, repeated emphasis should be placed on the possible complications of local anesthesia.

REACTIONS

The "reactions" to local anesthetic drugs may take several forms including the allergic response, the psychogenic response, and the toxic response (result of overdosage). The latter is considerably more common. True idiosyncratic response to local anesthetic drugs is extremely rare but by no means impossible.

The symptoms and signs which characterize these various responses are:

1. Allergic response—requires previous sensitization.
   a. Urticaria, local or generalized, and pruritus
   b. Edema of face, hands, and possibly other superficial areas
   c. Laryngeal and possibly tracheobronchial edema and spasm
   d. Hypotension and tachycardia
2. Phychogenic response—associated with fear.
   a. Syncope preceded by dizziness
   b. Skin pallor and sweating
   c. Hypotension and tachycardia
3. Toxic response—results from overdosage of drug. Severity of symptoms and signs depends on degree of overdosage.
   a. Headache and vertigo
   b. Tinnitus or "roaring" in ears
   c. Metallic taste in mouth
   d. Nausea
   e. Mild tachypnea
   f. Muscle fasciculation
   g. Drowsiness
   h. Unconsciousness
   i. Hypertension
   j. Tachycardia
   k. Convulsions
   l. Hypoventilation
   m. Hypoxia
   n. Cyanosis
   o. Hypotension
   p. Bradycardia
   q. Apnea
   r. Complete cardiorespiratory collapse
   s. Death

From the Department of Anesthesiology, University of Mississippi School of Medicine.

4. Idiosyncratic response—signs occur after administration of minute quantities of drug.

a. Rapid onset of cardiorespiratory collapse without prior symptoms

b. Death

TREATMENT OF REACTIONS

The treatment of these complications is based on recognition of the symptoms and signs which have been outlined. Differential diagnosis is of utmost importance.

Allergic Response

Allergic responses should be treated with antihistaminic compounds such as pyribenzamine or Benadryl given intravenously or intramuscularly. In extreme cases associated with severe respiratory tract edema, epinephrine injections may be necessary, using doses of 0.25 to 0.5 mg. administered subcutaneously or intramuscularly. If complete laryngeal closure occurs, tracheotomy may be necessary.

Psychogenic Response

Although the psychogenic response is perhaps the most common complication observed in the use of local anesthesia, one must not presume this as a routine diagnosis. It must be differentiated specifically from idiosyncrasy in spite of the rarity of the latter.

The patient suffering from a psychogenic response should be placed in the head-down position and administered oxygen by mask. If severe hypotension is present and does not reverse spontaneously, vasopressor drugs such as methoxamine or ephedrine in small doses should be administered intravenously.

Toxic Response

In the treatment of drug overdosage the important aspects are supporting the cardiovascular and respiratory systems and the control of convulsions. Perhaps the most important phase of therapy in this complication is the administration of oxygen utilizing, as necessary, assisted or controlled ventilation. During a convulsion, however, laryngospasm and/or chest wall rigidity may require the administration of a short-acting muscle relaxant compound before proper ventilation can be effected.

The use of barbiturates to control convulsions has been open to question recently, particularly in the usage of large doses, since these compounds may serve to increase the existing cardiorespiratory depression. Muscle relaxants such as succinylcholine will achieve the desired result without provoking further cardiovascular depression but will, of course, produce apnea which requires controlled ventilation.

Hypotension is treated by the administration of vasopressor compounds as discussed previously.

Cardiac arrest may occur in severe toxic responses to local anesthetic drugs and cardiac massage and controlled ventilation should be instituted immediately.

EMERGENCY ROOM EQUIPMENT

Since time is an all-important factor in achieving desired therapeutic response, it is essential that proper equipment and drugs are available in any emergency area to manage these and other similar complications. Each emergency room should contain a cart or table incorporating the following items:

1. Oxygen cylinder with regulator, breathing bag, and face mask
2. Suction equipment
3. Various vasopressor drugs including ampules of ephedrine, methoxamine, epinephrine, phenylephrine, and norepinephrine
4. Syringes and needles
5. Oropharyngeal airways and endotracheal equipment
6. Ultra short-acting barbiturates—thiopental or thiamylal in 2 per cent solution
7. Vial of succinylocholine
8. Scalpel handle and blade
9. Chest retractor
10. Rubber gloves
11. Electrical defibrillator
12. Ampules of potassium chloride and calcium chloride

PROPER USAGE

The availability and proper usage of these items according to specific indication are mandatory in assuring rapid recovery from complications associated with local anesthesia.

Prevention of these complications is based on adequate knowledge of the pharmacology of local anesthetics. Careful needle placement and injection, exercising care to avoid accidental intravascular injection and overdose are of paramount importance.

The topical application of local anesthetic drugs in diagnostic or therapeutic endoscopy has been a particular source of complications related to overdosage. Although this technique is valuable, extreme caution must be exercised in avoid-

ing the excessive use of highly concentrated solutions of these drugs.

There are a number of extenuating circumstances in which general anesthesia may be employed in the emergency room as well as in outpatient clinics and x-ray departments. For several reasons this practice should be minimized: 1. lack of properly equipped areas with approved electrical outlets and spark-proof apparatus, 2. the necessity of transporting anesthesia equipment from place to place, and 3. the frequent shortage of personnel.

INADEQUATE PREPARATION

Perhaps the most important hazard involved in the use of general anesthesia under emergency circumstances is the inadequate preparation of patients. In the busy emergency room there is a tendency to concentrate on the present illness of the patient to the exclusion of an adequate investigation of his previous medical history. Pertinent questioning regarding drug sensitivities, cardiorespiratory complaints, and recent ingestion of food or drink is of utmost importance in this regard. Minor surgical procedures in small children such as suturing of a laceration frequently require general anesthesia due to the difficulties encountered in obtaining sufficient cooperation to allow the infiltration of local anesthesia. A major problem in these children is the presence of solid food in the stomach. Vomiting and aspiration are distinct possibilities under these circumstances. Every effort should be made to induce vomiting prior to induction of anesthesia if any doubt exists as to the most recent ingestion of food or drink. In cases where trauma has occurred soon after a meal, gastric emptying time is delayed considerably.

MEDICAL ENTITIES

The necessity of producing general anesthesia in the emergency room is not limited to surgical patients. There are a few purely medical entities which in their most severe clinical manifestations require extremely heavy sedation with opiate or hypnotic drugs or the actual induction of anesthesia using volatile or gaseous anesthetic agents.

Status epilepticus and status asthmaticus are cited as representative medical diseases which, as a result of refractoriness to other modes of therapy, may require general anesthesia as a lifesaving measure. In either case, the problem involved is that of establishing and maintaining an open airway and proper ventilation in order to promote adequate respiratory gas exchange. To achieve these aims, the anesthetist may employ one or more therapeutic approaches. A time-honored method of producing moderate to deep anesthesia in such cases utilizes an ether-olive oil mixture which is instilled rectally. This mixture contains approximately two parts of ether to one part of olive oil and for adult usage 3 to 5 cc. of the mixture are instilled slowly into the rectum by means of a syringe and rubber catheter. Absorption occurs fairly rapidly and effects are noticeably within 3 to 5 minutes.

Avertin solution and paraldehyde have been employed also for this purpose but results are variable.

STATUS EPILEPTICUS

In status epilepticus, intravenous thiopental or thiamylal will generally suffice to control the convulsive seizures. The barbiturate may be used in 2 per cent and serial injections of 100 to 150 mg. administered as required or a continuous infusion of 0.1 to 0.2 per cent may be utilized. Due to the tendency of these drugs to produce respiratory depression and laryngeal or bronchial spasm their use should be avoided in cases of status asthmaticus.

Intravenous infusion of succinycholine has been used successfully in these medical conditions in association with controlled respiration utilizing automatic ventilation machines of various types.

Of the inhalation anesthetics, vinyl ether and diethyl ether administered by the open drop technique have been used widely in emergency areas for short surgical procedures and for the medical entities described in the foregoing paragraphs.

SUMMARY

A few of the problems associated with the administration of various forms of anesthesia in the emergency room or other areas not generally well equipped for this purpose have been presented.

Emphasis has been placed on the necessity for anticipating complications and the importance of assuring the availability of equipment and drugs required for therapy. The training of personnel who may perform certain anesthetic procedures is emphasized particularly with reference to resuscitative measures. ★★★

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Castration in Carcinoma of the Breast

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While oophorectomy has long been accepted in advanced breast cancer, prophylactic castration is still a controversial subject. The author defines prophylactic castration as "surgical removal or x-ray suppression of the ovaries shortly after radical mastectomy in a patient whose disease is apparently limited to the breast or the axillary lymph nodes." He discusses arguments in favor of the procedure and considers experimental series.

He concludes that there is not enough evidence at this time to routinely recommend prophylactic castration in patients who are free of axillary metastasis. However, he maintains that the operation is indicated in all premenopausal patients when metastasis to the axillary lymph nodes is found or when other conditions give the patient a poorer-than-average prognosis.

OOPHORECTOMY HAS BEEN ACCEPTED as a palliative procedure for advanced breast cancer in premenopausal patients for many years. Schinzinger[1] in 1889 suggested castration as a method of treatment of breast cancer and in 1895 Beatson[2] first performed surgical castration for advanced breast cancer. Since that time it has been well established that castration induces a remission or halts the progress of the disease temporarily in many patients with advanced breast cancer.

PROPHYLACTIC CASTRATION

This paper, however, will consider a more controversial subject—"prophylactic castration." Prophylactic castration refers to surgical removal or x-ray suppression of the ovaries shortly after radical mastectomy in a patient whose disease is apparently limited to the breast or in whom there is no demonstrable metastasis beyond the axillary lymph nodes.

In support of oophorectomy in patients with cancer of the breast, it has been demonstrated that estrogen has a stimulating effect on both normal and malignant breast tissue. Also, carcinoma of the breast has been produced in experimental animals by large doses of estrogen.[3] Hyperplastic ovarian cortical stroma, which is thought to be indicative of increased or continued estrogen production, occurs more often in patients with carcinoma of the breast. Sommers[4] has reported that in 207 autopsies performed on patients who died of breast cancer, 86 per cent showed hyperplastic ovarian cortical stroma; whereas, in 248 autopsies on patients who had no cancer, only 37 per cent had this hyperplasia.

Sirtori[5] found 74 per cent of patients with breast cancer had hyperplastic ovarian cortical stroma. G. V. Smith[6] has reported an incidence of 91 per cent ovarian stromal hyperplasia in 11 cases of women with breast cancer whose ages were 48 to 69 years. This brings up the question of castration in the early menopausal and post-menopausal patient. It would probably be well to select these patients by use of the vaginal smear to determine the presence or absence of estrogenic stimulation.

THERAPEUTIC CASTRATION

Before discussing prophylactic castration, however, some of the features of therapeutic castration should be mentioned. First, it has been shown that surgical or x-ray castration produces palliative improvement in from 20 to 50 per cent of patients with advanced breast cancer.[7, 8, 9, 10] In general, there appears to be no correlation between the type of metastasis and the results of castration except in those patients with advanced liver or brain metastasis or markedly limited vital capacity due

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to pulmonary metastasis. In the case of pulmonary metastasis, all ablative procedures are contraindicated.

Most reports indicate oophorectomy to be superior to x-ray castration; however, Gordon and Segaloff[10] have recently reported essentially the same results in each when at least 1,200 roentgens are given over a seven day period. This would be well to remember when further surgery is contraindicated or refused by the patient. There is also evidence that ovarian tissue in the older patient is more susceptible to x-ray than in younger patients.[10, 11]

COMBINED PROCEDURE

The results of oophorectomy and adrenalectomy as a combined procedure do not appear to be sufficiently superior to oophorectomy alone to warrant this more formidable operation as the initial ablative procedure.[12, 13] It must also be considered that surgeons who perform a good oophorectomy are more readily available than surgeons who are able to perform the combined procedure. Another argument for castration as the initial procedure is that a later adrenalectomy or hypophysectomy may produce a second remission in the patient with advanced breast cancer.[14, 15, 16, 17]

As far as prophylactic castration is concerned, judgment as to its validity is best based on reports of groups who have practiced this procedure. See Charts 1 and 2.

CHART 1

FIVE YEAR SURVIVALS
NO AXILLARY METASTASIS

	Alrich[18]	*Horsley*[3]	*Smith*[6]	*Treves*[19]
Radical Mastectomy	84%	83.6%	76%	77.4%
Radical Mastectomy and Castration	90%	94.1%	83%	91.6%

CHART 2

FIVE YEAR SURVIVALS
WITH AXILLARY METASTASIS

	Alrich	*Horsley*	*Smith*	*Treves*	*Rosenberg*[20]
Radical Mastectomy	47%	39.4%	31%	39.4%	36%
Radical Mastectomy and Castration	56%	63.2%	74%	76.1%	59%

The most significant thing shown by the charts is the general agreement among the series. In those patients without axillary metastasis, the improvement with castration varied from 6 to 14.2 per cent. In those with axillary metastasis, the improvement ranged from 9 to 43 per cent. Alrich's series showed the least improvement. However, in this group patients with a poorer prognosis for various clinical reasons were chosen for castration. This may explain the discrepancy in his group with axillary metastasis when compared with the other series.

TREVES SERIES

In Treves series, the 91.6 per cent figure represents survival with oophorectomy, whereas, the figure was 80 per cent with x-ray castration. In Chart 2 under Smith's series, the 74 per cent figure is for those surgically castrated. This figure was 40 per cent in those castrated by x-ray.

In Rosenberg's group, the percentages given in Chart 2 actually are for survivals of more than five years in a series of cases followed five to 15 years. He also noted that castration was particularly favorable in the age group between 40 and 50 years. In this age group there was a survival of 68.8 per cent. Rosenberg, in studying patients who died less than five years after mastectomy, observed that castrates survived longer than women with functioning ovaries.

The series reported in Charts 1 and 2 are subject to the usual criticisms of questionable control and selection of patients. However, the overall improvement, particularly in those with axillary metastasis, appears to be significant.

At the present time, there is not enough evidence to routinely advise prophylactic castration for all premenopausal patients with no axillary metastasis. However, the procedure should be advised or at least discussed with patients who have a poor prognosis for other reasons.

OTHER CIRCUMSTANCES

There are several circumstances other than axillary metastasis which produce an unfavorable prognosis and which may indicate prophylactic castration. Among them are tumors located in the medial or subareolar area, tumors occurring during pregnancy or lactation, tumors which involve most of the breast when first seen, patients who fall in the age group of 40 to 59, inflammatory carcinoma, and tumors of the higher grades of anaplastic activity. In general, prophylactic castration for these conditions is a controversial procedure, especially in regard to operability.

In view of the results shown by various experimental series, it is this author's opinion that prophylactic castration is worthwhile for those patients with metastasis only to the axillary lymph nodes.

SUMMARY

1. Hyperplastic ovarian cortical stroma is much more common in patients with breast cancer than in those without breast cancer.

2. Oophorectomy is superior to x-ray castration in most instances, but there is a definite place for x-ray.

3. In premenopausal patients with carcinoma of the breast, castration should be the initial ablative procedure when recurrence after radical mastectomy becomes manifest.

4. There is not enough evidence at this time to recommend prophylactic castration routinely in premenopausal patients who are found to be free of axillary metastasis at the time of radical mastectomy. However, it probably should be recommended in selected cases who have a poorer than average prognosis because of reasons other than axillary metastasis.

5. Prophylactic castration is indicated in all premenopausal patients and in menopausal patients showing evidence of continued estrogenic activity when metastasis to the axillary lymph nodes is found at the time of radical mastectomy.

★★★

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FREE PHYSICIAN CARE

A recent survey by *New Medical Materia* shows that six out of 10 doctors devote 10 per cent or more of their work hours to free care. Where the care goes: 39.9 per cent to private patients treated without charge; 26.5 per cent to hospital ward service; 22.7 per cent to outpatient clinic service; and 10.9 per cent to relatives, miscellaneous community groups, and other professions. The average GP gives away $3,360 worth of care in a year and the average specialist, $4,812.

Maternal Mortality In Mississippi During 1958

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During 1958, MSMA's Committee on Maternal and Child Care studied 44 maternal deaths. The results are presented in this paper in terms of adequacy of replies, causes of death, and avoidable factors. Findings for 1958 are compared with those of 1957. Primary causes of death in both 1957 and 1958 were hemorrhage and toxemia.

THE FIRST DETAILED STUDY of maternal deaths in Mississippi, covering the calendar year 1957, has recently been reported by the Committee on Maternal and Child Care of the Council on Medical Service of the Mississippi State Medical Association.[1] Continuing study of maternal deaths year by year is of value because it may bring to light changes in incidence or causes of such deaths and may reveal new and important contributory or avoidable factors. For this reason the following report for the calendar year 1958 is presented.

METHODS

The methods used for the collection of data were the same as those described previously.[1] Briefly, a letter was sent by the committee to the physician who attended any woman dying during or within 90 days after pregnancy, requesting him to fill out a data sheet. Copies of each data sheet, from which all identification had been removed, were reviewed by committee members and discussed at quarterly meetings. Evaluation of the case followed the standards suggested by the Committee on Maternal and Child Care of the Council on Medical Service of the American Medical Association in its publication "Guide for Maternal Death Studies." In summary, this evaluation involved the determination of 1. a specific diagnosis, 2. the cause of death, whether direct obstetrics; indirect obstetric or nonrelated, 3. whether the death was avoidable, and 4. the avoidable factors present.

RESULTS

In presenting the results of this study, the findings for 1958 are compared with those for 1957.

Chairman, Committee on Maternal and Child Care of the Council on Medical Service, Mississippi State Medical Association.

From Table I it can be seen that there were 54 maternal deaths reported in 1958 as compared with 75 in 1957. This represents a 28 per cent reduction. Forty-five replies were received in 1958 to requests for information. Of these, 44 were usable. The percentage of replies received and replies usable showed virtually no change from that noted in 1957.

TABLE I

STUDY MATERIAL

	1957		*1958*	
	No.	*Per Cent*	*No.*	*Per Cent*
Total Cases Reported	75	—	54	—
Replies Received	64	85	45	83
Replies Usable	60	80	44	81

In 1958 the adequacy of the data received was again rated on a basis of 5 (complete information, including data sheet, adequate explanatory note, and autopsy report) down to 1 (minimal data). Although the response of physicians to the committee's inquiries was very good, there was little change in the adequacy of the information received (Table II). A slight, but not statistically significant, improvement was noted in that the

mean adequacy of replies for 1958 was 2.48 as compared with 2.35 for 1957. In addition, autopsy reports were available in six cases (14 per cent) for 1958 as compared with four cases (7 per cent) for 1957.

TABLE II

ADEQUACY OF DATA

	1957		*1958*	
Category	NO.	PER CENT	NO.	PER CENT
5	1	1.7	3	6.8
4	11	18.3	5	11.4
3	15	25.0	12	27.3
2	14	23.3	14	31.8
1	19	31.7	10	22.7
Total	60	100	44	100

Analysis of the usable replies in regard to causes of death is shown in Table III. Direct obstetric causes accounted for 86.4 per cent of the 1958 deaths as compared with 81.7 per cent of the 1957 deaths.

TABLE III

CAUSES OF DEATH

	1957		*1958*	
	NO.	PER CENT	NO.	PER CENT
Direct Obstetric	49	81.7	38	86.4
Indirect Obstetric	11	18.3	4	9.1
Undetermined	0	—	2	4.5

Table IV shows a further breakdown of the causes of direct obstetric deaths. In 1958 hemorrhage accounted for a smaller proportion and toxemia for a larger proportion of the maternal deaths as compared with 1957. Of the 16 cases in which hemorrhage was judged to be chiefly responsible for the death, the commonest causes were uterine atony (5 cases) and abruptio placentae (3 cases). Other causes of hemorrhage in 1958 were incomplete abortion, abdominal pregnancy, tubal pregnancy, placenta previa, retained secundines, ruptured uterus due to uterine scar, ruptured uterus due to obstructed labor, and undetermined.

TABLE IV

CAUSES OF DIRECT OBSTETRIC DEATHS

	1957 No.	*Per Cent of Total Deaths Studied*	*1958 No.*	*Per Cent of Total Deaths Studied*
Hemorrhage	29	48.3	16	36.4
Toxemia	10	16.7	14	31.8
Infection	6	10.0	3	6.8
Vascular accidents	—	—	1	2.3
Anesthesia	1	1.7	3	6.8
Other	—	—	1	2.3
Undetermined	3	5.0	—	—

Evaluation of the avoidability of deaths discussed by the committee indicated that a high proportion of them (86.4 per cent) were considered, under ideal circumstances, to have been avoidable (Table V). It should, however, again be pointed out that in many instances the circumstances surrounding the death were far from ideal.

TABLE V

AVOIDABILITY

	1957		*1958*	
	NO.	PER CENT	NO.	PER CENT
Avoidable	54	90	38	86.4
Nonavoidable	5	8.3	5	11.3
Undetermined	1	1.7	1	2.3

Possible avoidable factors were also considered by the committee. In 25 cases a single factor appeared to be predominant and in 13 cases more than one avoidable factor was present. Breakdown of the avoidable factors into professional, patient, hospital, and undetermined factors indicated that professional factors were considered to be important 34 times, patient factors 16 times, hospital factors once, and undetermined factors twice.

COMMENT

The continued excellent response of Mississippi physicians to requests for completion of data sheets has been a source of great encouragement to the committee. Our particular thanks are due to those who took the trouble to write out a chronological record of the events preceding the maternal death. It is not easy, in critical circumstances, to make adequate notes of what happens. But this is the only way by which one can later survey the whole case and consider dispassionately exactly what occurred and what might have been done differently.

During the study of the 1958 maternal deaths there remained many cases in which the diagnosis of a definite cause of death could be no more than an educated guess. This occurred even in some instances where relatively complete information was supplied by the responding physician. Often the

performance of an autopsy would have been of material help. The record in this respect is still not enviable since an autopsy was performed in only six of the 44 reported deaths (14 per cent). A maternal death is often different with regard to autopsy from many other deaths, particularly those in older persons. It is frequently a sudden affair and its cause is often obscure. It would assist not only the attending physician but also the family if a definite diagnosis could be established by autopsy.

In 1958 the number of deaths due to toxemia showed an absolute and proportionate increase, while those due to hemorrhage showed a decrease. Although the importance of hemorrhage should not be minimized, a few comments on the problem of toxemia would appear to be in order.

TOXEMIA PROBLEM

First, in eight of the 14 cases (57 per cent) of toxemia the committee felt that avoidable factors for which the patient was responsible contributed to the death. In five cases these consisted of lack of antepartal care and in three cases of failure to follow a physician's advice. In four other cases it seemed likely that failure to obtain adequate antepartal care, although not primarily responsible, contributed in some degree to the patient's death. Thus, in 12 out of 14 cases (86 per cent) inadequate antepartal care was implicated. This serves to emphasize that toxemia is a disease which can be ameliorated to a large extent by good care during pregnancy, Patients, who attend regularly can be properly advised as to diet and general care. In these women the early manifestations of preeclampsia-eclampsia, hypertension, albuminuria, and excessive weight gain can be promptly treated. While the patient has the responsibility of seeking medical care, physicians have the duty of publicizing the extreme importance of regular antepartal care in preventing toxemia and other serious complications of pregnancy.

PREECLAMPSIA-ECLAMPSIA

Secondly, when preeclampsia-eclampsia does develop, it is important to realize that it is potentially lethal. A young primigravida in the last trimester of pregnancy who is edematous and has a blood pressure of 200/120 with 3+ albuminuria is seriously ill. Prompt treatment is needed to reduce her blood pressure and for this hypotensive drugs are usually required. The dangers of eclampsia, placental separation, fetal death or even permanent hypertension are too great to permit delay. Early delivery should be planned as soon as the patient is stabilized, provided that the baby is of adequate size. Where the baby is very small, a difficult problem is presented. But even in this situation when there is any evidence that the mother is not continuing to show a favorable response to treatment, induction of labor should be strongly considered. In general, cesarean section in these patients should be reserved for those in whom induction of labor by intravenous oxytocin and rupture of the membranes does not succeed.

TREATMENT

Thirdly, a patient who develops eclampsia is critically ill. She needs constant round-the-clock individual nursing with her physician in close attendance. Again, vigorous attempts need to be made to stabilize the patient and then induce labor as soon as possible. Usually this can be done within 24 hours and possibly within 12 hours. Careful observation needs to be maintained for at least 36 hours after delivery because of the danger of postpartal eclampsia.

SUMMARY

1. Fifty-four maternal deaths occurring in Mississippi during the year 1958 have been studied by the Committee on Maternal and Child Care of the Council on Medical Service, Mississippi State Medical Association.

2. Response to the committee's requests for information regarding maternal deaths has continued to be excellent. Forty-four usable replies were received.

3. Results are presented in terms of adequacy of replies, causes of death, and avoidable factors according to the AMA "Guide for Maternal Death Studies."

4. The findings for 1958 are compared with those for 1957. There was a slight improvement in the adequacy of replies and little change in the proportion of direct obstetric or avoidable deaths. Among the causes of direct obstetric deaths, toxemia showed an absolute and relative increase.

5. The prevention and management of preeclampsia-eclampsia are discussed in relation to the committee's findings. ★★★

2500 North State Street

REFERENCE

1. Newton, M.: Maternal Mortality in Mississippi During 1957, J.M.S.M.A. 1:47 (Feb.) 1960.

Case Report III of the MSMA Maternal Mortality Study

MARGARET P. VELLER, M.D.
Natchez, Mississippi

MSMA's Committee on Maternal and Child Care discusses a case where preeclampsia-eclampsia is the cause of maternal death.

The patient, a 24-year-old primigravida, entered the hospital at eights months gestation having had no antepartal care. Thirty-six hours after admission she died, undelivered. Committee findings are discussed and factors of avoidability assigned.

THE FOLLOWING CASE REPORT illustrates one of the more important causes of maternal deaths—toxemia. It presents a typical story of preeclampsia-eclampsia with its attendant complications, culminating in death.

CASE NO. 123-13490-58

L. Z., a 24-year-old colored married primigravida, presented herself for admission to the hospital at approximately eight months gestation, having had no antepartal care. On admission she was having uterine contractions of 30 seconds duration at 30 minutes intervals. She did not recall the date of her last menstrual period and no history of previous disease could be obtained.

She showed pronounced edema of the face, hands, feet, and legs and was markedly obese with a masculine habitus. Her usual weight was reported to be about 240 pounds. Her abdomen was distended with a gravid uterus near term, with the fetus in a cephalic presentation and fetal heart tones audible at 144 per minute. The cervix was effaced but not dilated. She had a 4+ albuminuria, negative VDRL, 11.1 gm. per cent hemoglobin and was Rh positive.

She was placed on bed rest and Chlorothiazide 500 mg. twice daily. Twenty-four hours later, her blood pressure had fallen from 240/130 to 200/120 and she was considered improved. Shortly thereafter she became nauseated, vomited, and began having convulsive seizures. Intravenous amobarbital was given to control the convulsions, and magnesium sulfate was then started intramuscularly.

Her course was inexorably and rapidly downhill with the development of acute congestive heart failure and pulmonary edema. Oxygen, intravenous mercurial diuretics, cedilanid (R), and aminophyllin were given without response. Consultation was obtained with a surgeon who agreed that cesarean section under such conditions would be lethal to the patient. She died soon afterwards, undelivered, 36 hours after admission.

COMMITTEE FINDINGS

I. Adequacy of Data. The data obtained in this case were rated as 3 in adequacy on a scale of 1 (minimal) to 5 (complete data sheet, relevant explanatory note, and autopsy report).

II. Cause of Death. (Direct obstetric, indirect obstetric or nonrelated cause.) This was considered to be a direct obstetric death due to toxemia—antepartal eclampsia.

III. Avoidability. This was considered, under ideal circumstances, to be an avoidable maternal death.

IV. Factors of Avoidability. A combination of patient and professional factors were considered to be present. Professional factors considered important were the management of preeclampsia-eclampsia and patient factors were obesity and the lack of antepartal care.

DISCUSSION

The attending physician was in an unenviable position, confronted with a mountainously obese, obviously toxemic woman who had received no

Obstetrician-gynecologist member, Committee on Maternal and Child Care.

antepartal care and was incapable of giving him an adequate history. After 24 hours her blood pressure had dropped. It was still alarmingly high. This patient would certainly have benefited from some form of hypotensive therapy. Many preeclamptic patients show a satisfactory response to large doses of reserpine, i.e. 5 mg. intramuscularly, repeated in one hour if indicated, followed by 5 mg. intramuscularly every six hours as necessary so long as the blood pressure remains above 150 mm. systolic. This patient probably would have required a more potent and rapidly acting drug, such as a continuous intravenous infusion of 40 mg. hydralazine in 1000 cc. 5 per cent dextrose in water. A combination of hydralazine and Unitensen (R) has also been used extensively with excellent results.

BLOOD PRESSURE MANAGEMENT

If this illness represented preeclampsia-eclampsia superimposed upon hypertensive vascular disease, it might have been unnecessary and even undesirable to lower her blood pressure to 140/90. Lacking a history to substantiate this diagnosis, I would have preferred gradually bringing the systolic pressure down to the vicinity of 160 mm. She had been on Chlorothiazide in recommended dosage—500 mg. twice daily. Even larger doses, to 2000 mg. daily, might have been beneficial.

The patient apparently received no sedation before her convulsion. Phenobarbital in doses of 30 mg. or more every six hours would have been helpful, and this barbiturate does not increase cerebral ischemia. It is also more pleasant for the conscious patient than intramuscular magnesium sulfate.

OTHER INFORMATION

It would have been interesting to know what her uric acid, nonprotein nitrogen, total serum proteins, and albumin-globulin ratio were, if these were available. Although she had a satisfactory hemoglobin level on admission, this may have represented a falsely high value because of hemoconcentration. It would have been worthwhile to know the appearance of her eye grounds and especially to know her total urinary output.

With more vigorous treatment of the preeclampsia, the convulsive seizures might have been circumvented, permitting induction of labor as soon as her condition was stabilized. She almost certainly was not in labor on admission. The uterine irritability probably indicated that induction could have been accomplished satisfactorily with an intravenous infusion of oxytocin, especially if the head were well engaged so that the membranes could be ruptured. By continuing the infusion through delivery and one to two hours postpartum, the likelihood of hemorrhage could have been minimized without the necessity of giving ergonovine or methyl-ergonovine with their known tendencies to increase blood pressure. The hypotensive drugs could have been continued as needed for the first 36 hours after delivery and then gradually discontinued.

PATIENT'S COURSE

Once the patient developed convulsions her course was rapidly and progressively downhill and at this time she may have become unsalvagable. The close temporal relationship of vomiting to the onset of convulsions brings out the possibility of aspiration, although we have no evidence that this occurred. The seizures were promptly controlled with intravenous amobarbital, oxygen was started, and she was given magnesium sulfate intramuscularly. Acute congestive failure and pulmonary edema rapidly developed and treatment for this was to no avail. Pulmonary edema in an eclamptic is ominous. Consultation was obtained and the consultant felt that the patient could not withstand a cesarean section. She died shortly thereafter and unfortunately a request for autopsy was not granted.

CAUSE OF DEATH

The physicians attending her felt that she died from a cerebral vascular accident due to toxemia. Acute pulmonary edema may follow massive intracerebral or intraventricular hemorrhage, and the mechanism of this is not clearly understood. Little can be done to alleviate the situation, and this may have happened in this patient. In the absence of an autopsy, however, one may postulate that death could have resulted from cardiac failure with pulmonary edema, a common cause of death in eclampsia, even without overt cerebral hemorrhage. It is also possible that respiratory obstruction occurred. This is common in patients who have repeated convulsions requiring large doses of barbiturates for control. It may be due to central depression and also to local edema. It usually does not develop with the first or second convulsion but appears later. In such circumstances tracheostomy may be lifesaving. In the present case we have no evidence whether it was

indicated or not, but the circumstances were such that respiratory obstruction might well have been present.

SUMMARY

A maternal death is described in which the major causative factors appeared to be the complications of preeclampsia-eclampsia. This disease is preventable in large part. Of great importance in prevention is adequate antepartal care. Treatment of severe preeclampsia by hypotensive drugs and other means together with early induction of labor when the patient is stabilized remain the keystones of treatment. Even when convulsions develop, maternal survival should be the rule rather than the exception when treatment is adequate. ★★★

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FLUORIDATION: THE MILKY WAY

Insider's Newsletter reports a new controversy over the old issue of fluoridation. Behind the fresh furor is a report to the Fifth International Congress on Nutrition by researchers at Louisiana State University's School of Medicine, who found a startling reduction of tooth decay in children taking fluoridated milk. The just-completed four-and-a-half year experiment was conducted with two groups of children in grades one through four. One group was given a half pint of fluoridated milk per day; the other half received milk with no fluorides added. Results observed: An 80 per cent reduction in dental caries for those taking the treated milk. The research team concluded that assimilation and utilization of fluorides may be increased if taken in combination with milk or other nutritives. However, there is still some doubt about the value of combining fluorides with dietary elements. The American Dental Association, which advocates fluoridation of community water supplies as a dental decay preventative, advises that fluorides in milk have not yet been evaluated.

Clinicopathological Conference X

Conducted by the Department of Pathology
University of Mississippi
School of Medicine
Jackson, Mississippi

A 16-year-old colored girl with the specific complaint of headache is the subject of Journal MSMA's tenth CPC. Participants are Drs. Thomas M. Blake, Robert D. Sloan, Fred Allison, Jr., Joel Brunson, and John F. Jackson.

A. J. B., A 16-YEAR-OLD colored schoolgirl, was admitted to the University of Mississippi Teaching Hospital June 8, 1959, for the first time complaining of headache. She had been well until one month prior to admission when she developed frontal headache and pain behind her left eye, followed by anorexia. Two weeks prior to admission she developed fever, generalized aching, sore throat, and progressive loss of weight. One week prior to admission she noted low back pain and soreness on motion of the joints of her extremities without swelling, heat or redness. Though she had no vomiting, she lost 18 pounds in weight by the time of admission.

Review of systems revealed that she had noted decrease in vision of the left eye since April 6, 1959. Past history revealed no evidence of allergies, accidents, surgery, or serious illness, and rheumatic fever was specifically denied.

PHYSICAL EXAMINATION

Physical examination showed blood pressure 100/70, pulse 120, temperature 103.2. The patient seemed to be a well-developed, well-nourished colored female adolescent appearing acutely ill. A small left conjunctival hemorrhage with a light spot in its center was noted. A large hemorrhage with a small white spot at its upper outer edge was noted lateral to the left optic disc. The optic discs and extraocular movements were normal, but there was decreased visual acuity in the left eye. There were several large tender upper left anterior cervical nodes, but the neck was not stiff. There was a regular rhythm with tachycardia and a grade III systolic apical murmur was associated with a thrill, though there was no clinical cardiac enlargement. The lungs were clear and the abdomen was soft without palpable liver, spleen, kidney, or abnormal mass. Pelvic examination revealed thick leukorrhea, a clean cervix, and a small posterior fundus without adnexal or rectal abnormality. Neurological examination showed equal and active dorsal tendon reflexes without motor weakness.

LABORATORY EXAMINATION

Laboratory examination revealed a hematocrit of 20 volume per cent; hemoglobin 7.3 gm.; white blood count, 9,000; 8 per cent monocytes; 14 per cent lymphocytes; 36 per cent segmented leukocytes; 40 bands; 2 per cent eosinophils. Urinalysis showed 2 plus albuminuria, 5 to 10 white blood cells per high power field, 5 to 10 red blood cells per high power field, and occasional coarsely granular casts. Sputum was negative for acid-fast bacillus and fungi, and culture reported alpha hemolytic streptococci and neisseria as well as moderate coagulase positive *Staphylococcus aureus*. Platelets 243,000; clotting time 12 minutes; prothrombin time 19.4 seconds, 22 per cent of control; potassium—4.1 mEq.; sodium—137 mEq.; total serum proteins 7.9 gm.; albumin 4.6 gm.; globulin 3.4 gm.; nonprotein nitrogen—16 mg. per cent; antistreptolysin O—100 units; C-reactive protein 3 plus, febrile agglutinations negative except for typhoid O-1:640.

PATIENT'S PROGRESS

The day after admission, the first of three blood cultures drawn the night of admission was re-

ported to contain a streptococcus. The patient was then begun on a course of therapy to include 1.2 million units procaine penicillin given intramuscularly every 12 hours; streptomycin 1.0 gm. daily given intramuscularly; 5 million units aqueous crystalline penicillin given intravenously every 12 hours, and probenecid 0.5 gm. given every 6 hours.

On June 10, all three blood cultures obtained on admission were reported to contain alpha hemolytic streptococci. On June 12, the patient became confused and withdrawn so that a lumbar puncture was performed, revealing opening pressure 180 mm.; fluid opalescent, containing 18 white blood cells, 33 per cent polymorphonuclear leukocytes, 66 per cent lymphocytes, and 1090 red blood cells; cerebrospinal fluid, protein 56 mg. per cent, glucose 55 mg. per cent, chloride 120 mEq. That evening the blood pressure fell to 70/55 returning to 90/55 following Vasoxyl given intramuscularly and blood transfusion.

SYMPTOMATOLOGY

On June 13 she had cough, hemoptysis, left upper chest pain and right calf tenderness. She was given Mephyton 100 mg. intravenously slowly because of the bloody spinal fluid and underwent ligation and division of the right superficial femoral vessels on June 14. On June 16 she vomited coffee ground material and passed a large, dark, but not tarry, stool. She improved slightly, but had recurrence of headache on June 22 followed by aphasia and confusion which cleared by June 25. She became unconscious for 3 minutes on June 27 and repeat lumbar puncture revealed opening pressure 220 mm. and bloody fluid containing 1,804 white blood cells, 60 per cent polymorphonuclear leukocytes, 40 per cent lymphocytes, 22,500 red blood cells with a clear lemon-yellow color of the supernatant fluid after centrifugation.

ANTIBIOTIC THERAPY

Because of tube sensitivity studies indicating growth of the organism in 25 μ/ml. penicillin and inhibition by 50 μ/ml., the intravenous penicillin was increased to 30 million units daily by continuous catheter, first femoral, later cephalic. After July 9, she remained afebrile, and on July 19, all antibiotics were discontinued after remarkable improvement. Six blood cultures during the course of therapy were sterile. A bilateral carotid arteriogram performed July 13 was reported to show no abnormality. She was discharged July 24 to continue taking ferrous sulfate 0.3 gm. twice a day and ascorbic acid 0.5 gm. twice a day.

She was returned to the University of Mississippi Teaching Hospital on Aug. 2, 1959, dead on arrival.

DIAGNOSTIC FINDINGS

Dr. Blake: "The patient was a 16-year-old Negro girl with an eight week history of visual disturbances in her left eye. Exactly what this means is not described, but I take it that she could not see well. There was also a four week history of frontal headaches and left retro-orbital pain and a two week history of evidence of an acute diffuse febrile disease. Her past history had not been remarkable and evidently she had always been in good health—though this specific statement is not made, I gather that she had always been in good health and specifically she had not had anything suggestive of acute rheumatic fever.

"On examination she showed several findings which can be generalized easily. There was evidence of acute illness. She was acutely ill, and had petechiae, including Roth spots (which I learned about recently and which we will get to in a minute), and what was probably mitral regurgitation. Her cardiac findings are described sketchily, but her murmur was systolic, maximal at the apex and associated with a thrill. This in a 16-year-old patient must be interpreted as mitral regurgitation in the absence of other evidence and some reason to think otherwise. One wonders how long she had had this valvular disease. She had not had rheumatic fever we know, as such, but we don't know how long she had had the valvular disease. This is probably of academic interest. And she had tachycardia.

LABORATORY STUDIES

"Specifically, there was no hepato-splenomegaly and there was no evidence of increased intracranial pressure—which I think is worth mentioning here because of subsequent developments. By this I mean her optic discs were not edematous. Her laboratory studies showed a normal total white count with a slight shift to the left in the differential but no eosinophilia. She was anemic, though this anemia was not studied in detail. Her urine contained white cells, red cells, casts, and albumin indicating glomerular involvement. Also, she had a prolonged prothrombin time, but no other significantly abnormal coagulation defects were noticed. No abnormalities of liver function were noted but very few tests were done.

"At this point she can be described as having a subacute diffuse inflammatory disease. Speculation as to etiology could include such things as periarteritis nodosa and lupus erythematosus and

I suspect I could dream up some more if I tried. But this would be simply to ignore the fact that in the next paragraph the blood cultures are reported as positive, and I don't intend to ignore this. If she had some rare disease in addition to bacterial endocarditis, I just don't know what it was. She had subacute bacterial endocarditis which was due to streptococcus viridans, and I suspect that when she was admitted she was thought to be no particular problem. After all, this is a disease in which they tell us that the infectious aspect can be brought under control in 80 or 85 per cent of the patients. She was young and basically healthy and the people on the ward probably did not think of her as presenting any great problem when she came in.

ROTH'S SPOTS

"Comments at this stage of the discussion must include a word about these Roth's spots. Dr. Roth, describing septic conditions of the eye in a paper in 1872, mentioned that in patients who had infectious diseases, apparently including bacterial endocarditis, there was sometimes petechiae in the retina. This observation was made and passed over and nobody got very excited about it. A few years later a Dr. Litten picked it up and described it in more detail and thought that the petechiae seen in the retinae were characteristic of subacute bacterial endocarditis. These lesions are described as oval white spots surrounded by hemorrhagic areas lateral to the discs. Statistically they occur in from 25 to 40 per cent of cases of subacute bacterial endocarditis in the few series which have been reported and are important in this case as an explanation for her visual disturbances.

RHEUMATIC VALVULAR DISEASE

"The absence of history of rheumatic fever in a patient with findings as she had does not militate at all against the diagnosis of rheumatic valvular disease. Fully 50 per cent of patients who have rheumatic valvular disease by histologic criteria will not have had histories of recognizable acute rheumatic fever. The fact that her spleen was not palpable also is not strongly against the diagnosis. This is one of those things which depend on the spleen-feeling propensity of the examiner as well as the series one studies. The incidence of palpable splenomegaly in subacute bacterial endocarditis varies anywhere from 30 to 90 per cent depending upon the series. The liver is not generally thought of as being enlarged, at least by me, though I find that hepatomegaly is said to be characteristic of the disease, especially in the elderly. Well, she wasn't elderly and so that doesn't help much either. I can find no reference to coagulation defects or very much about liver disorder in the disease. The liver may be congested and there may be infarcts of the liver, but that's all. Anything can happen but hepatic dysfunction is not characteristic of subacute bacterial endocarditis.

COURSE IN HOSPITAL

"Glomerulonephritis, or at least embolic nephritis, is not an uncommon complication of the disease, and I think that this is what she had on the basis of these early findings.

"Her course can be summarized in several steps. The outstanding feature of her course in the hospital, it seems to me, was the episodic cerebral dysfunction, manifested by confusion, aphasia, hyptotension, headaches, and unconsciousness. The unconsciousness is not described at all. I suppose she didn't have a seizure, but I I don't know. She had cerebral episodes of some sort and all of these were transient and evidently responded to supportive therapy including blood and sympathomimetic amines.

SPINAL FLUID STUDIES

"Lumbar punctures showed normal tension and bloody fluid which wasn't cultured but which had normal sugar and chloride and which had cells in it in proportions which would make me think that this was just blood in the spinal fluid. The first tap could have been a traumatic, a so-called bloody tap, I suppose, since no mention was made as to whether the fluid was xanthochromic or whether the red cells were crenated. It could have been a bloody tap but I don't think it was because of the circumstances which precipitated in the first place. She had something going on inside her head.

"The second tap was 15 days later. This time the fluid was described as xanthrochromic. There was still no mention of crenation. Just leaning over backwards trying to find loopholes, I suppose it's conceivable that this xanthrochromia could be a result of the blood which got into the spinal fluid at the time of the first bloody tap and that the red cells were representative of the second bloody tap since it is not stated whether they were crenated or not. I discussed this with Dr. Naef, who wanted to be here this afternoon but couldn't, and am authorized to say that it is unlikely that the amount of blood that would be indicated by the figures given for that first tap would be manifest

by anything two weeks later. It is very unlikely and in the clinical settings in which these taps were accomplished I choose to think they were not traumatic taps but that she actually had blood in her spinal fluid. This is the assumption that we will go on. They both probably represent blood in a subarachnoid space.

VASCULAR INVOLVEMENT

"She had a pulmonary embolus which is well described. I just can't interpret that story as anything but a pulmonary embolus. There is not much doubt about it. We don't really have any way to treat pulmonary embolism until somebody develops good fibrinolytic mechanisms or surgical removal but we do try to prevent subsequent pulmonary embolism and there are two ways. One is by the use of anticoagulants and the other is by use of mechanical means to interrupt the channel through which the embolus would occur. Since anticoagulants were obviously contraindicated because she was bleeding elsewhere, they elected to do a saphenous vein interruption which is a perfectly acceptable and logical way to treat this situation, and apparently it was effective. She didn't have any more evidence of pulmonary embolism while she was in the hospital.

"One of the most difficult aspects of this thing to me is this gastrointestinal bleeding. We had a CPC about two months ago in which we had a GI bleeder with bacterial endocarditis but that one had the advantage of Stuart factor deficiency and clear-cut out-and-out coagulation defects. If this one had coagulation defects, I don't know what they were. Her prothrombin time was a little prolonged but that was not very impressive to me.

"Carotid arteriograms after she was clinically well showed no mass. I suspect that the clinicians were thinking in terms of subdural hematoma, brain abscess or brain tumor. Antibiotic therapy was effective and the bacterial endocarditis was brought under control and she was sent home.

BACTERIAL ENDOCARDITIS

"Comments at this stage are several. Bacterial endocarditis is a diffuse disease which may be manifest anywhere in the body. To learn all possible manifestations of bacterial endocarditis would be a hopeless task because it depends on which artery is involved and whether this artery is involved simply by occlusion or by occlusion with infected material or whether there is a destructive process in the heart or elsewhere as a result of the growth of bacteria. The complications of bacterial endocarditis other than the evidence of a low grade systemic infection are local and depend on where the emboli land. That's about it.

"Several of her symptoms could have been due to an abscess with meningitis, but there is little reason to think that such is the case. The spinal fluid changes were not those of meningitis, the physical signs of meningitis were not described, and the spinal fluid apparently wasn't cultured. This does not necessarily mean that she didn't have a brain abscess, though there is little, if anything, to support it. All sorts of intracranial symptoms have been described in bacterial endocarditis; infarction or hemorrhage may occur and the specific symptoms and signs depend on which vessel is involved.

MYCOTIC ANEURYSM

"A mycotic aneurysm is simply an aneurysm due to destruction of the wall by a microorganism, and mycotic aneurysms occur as a consequence of infected embolism in bacterial endocarditis. They can rupture and blood can get into the cerebral tissue or into the subarachnoid space. Simple infarction without infection or without rupture is also a possibility but this would not do very well to explain the blood that was found. I think that she had subarachnoid hemorrhages and subarachnoid hemorrhages have been reported repeatedly as complications of bacterial endocarditis. Her pulmonary embolus was evidently a complication of her debility rather than of her bacterial endocarditis. She had evidence of thrombophlebitis in her leg, she had been sick for some time, and she was in bed. I think it more likely that her pulmonary embolus came from her leg than from a mural thrombus in a heart chamber, and I suspect that the clinicians on the ward at the time did too.

GI BLEEDING

"The gastrointestinal bleeding is the hardest finding to explain. There are no references at all in the literature that I can find, and I looked hard, to GI bleeding as a consequence of bacterial endocarditis. The patient whom we saw here a few weeks ago had it, but she had the coagulation defect that we mentioned before. This patient had one isolated episode of GI bleeding and, as far as we know, no more. We don't have enough clinical information to speculate as to what that was. We could go through the whole list of possibilities of GI bleeding from varices to peptic ulcer to carcinoma of the stomach, I suppose. I suspect that this was upper GI bleeding, but we just don't have much basis for such speculation. In the circum-

stances, it seems to me that she infarcted a piece of GI mucosa and bled from it. This would seem to have been reported before but this is the best bet that I have to explain her GI bleeding.

TERMINAL COURSE

"As far as her death is concerned we don't know anything except that she died. There is no indication as to how she had done in the nine days she had been out of the hospital or what it was that made them decide to bring her back to the hospital. Maybe she was dead. Though no electrocardiograms were mentioned in the protocol, I found from heart station records that four were made during her admission, two or three in the first few days after admission, and they were all easily within normal limits. The first one was made at the time of admission and is simply a normal electrocardiogram. The second one is not calibrated but I suspect that the voltage does not represent a significant change from the previous one, but the ST-T changes do. These are nonspecific changes, but are clearly more left ventricular than right ventricular and in a patient who has a lesion which might be overworking her left ventricle this would make good sense.

HEMODYNAMIC DIFFICULTIES

"Now if at the time of discharge when her febrile illness had been brought under control her electrocardiogram was becoming more abnormal, which the third tracing demonstrates to be the case, and she still had a tachycardia at a rate of 140, there is reason to assume that she had increasing hemodynamic difficulty despite the fact that her infectious process had been brought under control. Increasing hemodynamic difficulties are one of the most important complications of bacterial endocarditis. Patients can have their infection controlled only to die weeks, months, or years later of heart failure. Another reason to treat the patient as soon as possible, then, is to prevent local destruction of valve tissue. This girl could have gone home and gone into heart failure and died this way, but I don't believe that this is a logical explanation. She was out of the hospital only nine days. Congestive heart failure is more likely to occur much later, especially in one so young and basically healthy. She could have had other valves involved but we don't have any description of involvement of other valves, and I don't believe that her problem was simply going in heart failure.

DEATH FROM EMBOLUS?

"Pulmonary embolism can cause sudden death. We don't know if her death was sudden, but I think it is reasonable to assume that it was. She had had one pulmonary embolus but this was the result of debility rather than mural thrombus in her heart. I don't believe that she had another pulmonary embolus. It is a possibility which I can't exclude but I choose to think of as less likely than others. She could have had a myocardial infarct. Embolic myocardial infarcts have been reported many times in the literature as complications in bacterial endocarditis but they are still rare and reportable. Brain tumors, brain abscess, overwhelming infections, other things that we have mentioned could occur but I think that the most likely thing that happened to her is that she ruptured another mycotic aneurysm.

"I would like to know before I stop if there are any x-ray films. They are not mentioned except for the angiograms."

RADIOGRAPHY

Dr. Sloan: "Routine PA and lateral chest films obtained on the day of admission reveal no pathology. In particular the heart is of normal size and contour. A portable chest film on the sixth hospital day, during the period of cerebral difficulty, reveals some poorly defined parenchymal mottling in the left mid lung field, but nothing else of note. A repeat portable film two days later shows clearing of the mottling, with the lung fields being grossly clear. As indicated in the protocol bilateral cerebral arteriograms were performed later in her hospital course. The internal carotid arteries and their anterior and middle cerebral intracranial divisions are well shown, with the pattern being symmetrical and normal bilaterally. Routine skull and paranasal sinus films are also normal in appearance."

DR. BLAKE'S DIAGNOSES

Dr. Blake: "Well, I will list my final diagnoses and then ask Dr. Allison to comment. She had: 1. mitral regurgitation due to rheumatic fever, inactive, 2. subacute bacterial endocarditis, healed, 3. ruptured mycotic aneurysm of the cerebral artery with fatal hemorrhage. Brain tumor and abscess must be considered as alternatives, but I don't think they are at all likely because of the studies that Dr. Sloan described.

"The chief questions to be answered after we find out what she had are: 1. why did she bleed from her GI tract, and 2. did she have a pulmonary embolus? Neither of these may be answerable because it was sometime after each of these episodes that she came to definitive study. I haven't discussed the coagulation defect except to mention that it may have been a factor but there isn't any basis for further discussion. The anemia has been accepted as a consequence of her chronic infection. Dr. Allison, would you comment specifically about a typhoid titer of 1 to 640 which I chose to ignore?"

HIGH TITER

Dr. Allison: "I saw this patient on the medical wards and there was considerable concern concerning the nature of the cardiovascular problem. Although there was much discussion regarding the nature of the basic heart disease, it was believed to be basically of rheumatic origin. Otherwise, it seemed a straight forward problem of bacterial endocarditis. For this reason, I am unable to explain the elevated typhoid O titer since there was no reason to suspect recent salmonella infection. Isolated elevations are encountered in patients from this area usually as an anamnestic response after either prior immunization or previous contact with other strains of salmonella. I suspect such a mechanism was responsible for this patient's high antibody titer."

POSTMORTEM EXAMINATION

Dr. Brunson: "Thank you, Dr. Blake. When I get through, there will still be several things unexplained. The first thing that I am not going to try to explain is the typhoid titer. Dr. Coffelt, who performed this autopsy, is not with us today so I will just briefly review the gross findings. The heart was of normal weight. It did not appear dilated to any extent. Scattered over the heart, there were numerous petechial hemorrhages over the epicardial surface and one rather large hemorrhage in the interior of the left ventricular cavity. Also over the pericardial and epicardial surfaces were numerous, small, shallow white to yellow-white depressed areas primarily over the posterior aspect of the left ventricle.

"At the time of removal of the heart, palpation of the left anterior descending coronary artery showed what appeared to be a bulging in the upper portion of the artery. The vessel was quite firm on palpation and when cut across, it was evident that the lumen was obstructed by a greyish-white material which was not adherent to the vessel wall. The total length of this mass of material was approximately 0.8 cm. The coronary arteries were without evidence of sclerosis. One leaflet of the mitral valve showed a moderate degree of thickening otherwise there was no evidence of stenosis or regurgitation. There was also a slight fusion of the aortic cusps, but this was not marked to any great extent. They were a little bit thickened and small verrucous nodules were present along the free edges of each of the aortic valve cusps. These appeared reasonably innocuous although there was a little inflammatory action about them which was manifest by hemorrhage. As I mentioned, the major divisions of the coronary arteries were patent throughout except for that portion of the anterior descending branch which was obstructed near its site of origin from the aorta.

OLD SPLENIC LESION

"The pertinent findings otherwise included a moderate degree of pulmonary congestion and edema and a spleen which was of normal size but in which there were several large depressed grey-white and yellow infarcts. The kidneys were of normal size and displayed no gross abnormalities. Examination of the brain showed that along the cortical surface of the inferior aspect of the left occipital lobe there was a ragged, necrotic area which at its widest point was 2 cm. in diameter. The edges of this lesion were slightly elevated; the center was soft, and was distinctly yellow around the margins.

"There was a splenic lesion resulting from an old infarction in which the area had become softened. The soluble products had fused back and the region had shrunk down resulting in a contracted area. Adjacent to the old lesion was another that appeared to be considerably fresher in that there was a zone of reaction about it, shown by the hemorrhagic area which surrounded the yellowish portion. The lymphatic follicles were also prominent. The pulp of the spleen was quite soft and scraped off easily with a knife edge.

CEREBRAL LESION

"There was also a lesion on the left side of the brain which extended rather deeply down into the occipital lobe. The center of the lesion contained material which was soft and brownish. Around the exterior there was a discoloration which extended outward in a somewhat irregular fashion. Here it was much more soft and necrotic and less well defined, and it extended out to the surface of this portion of the brain. This was the only gross lesion identifiable in the brain, and we thought that this probably represented an old abscess.

The possibility exists, however, that this could be an area of infarction with secondary hemorrhagic necrosis.

"Microscopically, the first slide (Figure 1) is a section from one of the cusps of the aortic valve

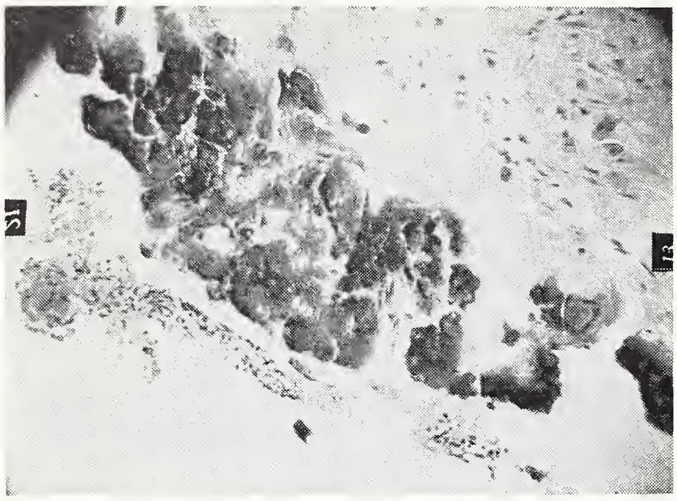

Figure 1. Section from one of the cusps of the aortic valve.

and shows the cusp to be slightly thickened. The thickening is made up of recently formed collagenous fibers. There is some cellular reaction; the nature of which is primarily large cells, mononuclears and other types of cells with ill-defined borders which tend to run together. Around the free edge of this cusp there are masses of calcium and some intermingling of hyaline material. These are present in large aggregates along the surfaces. There are a few clusters of microorganisms present in areas of this valve, but they are certainly not present in any great numbers. There is a relative paucity of inflammatory action, but good evidence of fibrosis, and large clumps of hard, deeply basophilic material which undoubtedly represent deposits of calcium. These clumps appear just to be hanging on the edges of this cusp. Grossly, these would appear white or chalky, and we presume that this is the type of material which embolized and obstructed the main branch of the left anterior descending coronary artery. This may account for what we presume is a sudden death in this case although we have no further history regarding the nature of her death.

"Sections from the myocardium show numerous intramural branches of the coronary arteries which contain masses of this calcific debris, undoubtedly arising from the aortic valve (Figure 2). Around many of these and through this material, there is fibrosis with obliteration of the arterial lumen. There are numerous polymorphonuclear leukocytes, and interestingly, there are numerous eosinophiles scattered about some lesions. I do not recall seeing eosinophiles in lesions of this type before.

MUSCLE DESTRUCTION

A great deal of the muscle of this heart has been destroyed and this appears to be of varied ages. For example (Figure 3), some lesions are fairly old, I would say, because almost all of the muscle has been replaced by light, loose connective tissue and most of the inflammatory reaction has disappeared. In other areas the lesions appear of more recent origin. There are numerous capillaries, and there is a background of polymorphonuclear lymphocytes and macrophages, some of which contain hemosiderin.

"Still other lesions appear even more recent, manifested by intense acidophilia of the muscle, and aggregates of inflammatory cells. These lesions, then, represent varying ages of myocardial ischemic necrosis brought about by occlusion of numerous small intramural coronary arteries. In contrast to Dr. Blake's opinion, we feel that this lesion is probably one of the most common embolic complications of bacterial endocarditis. The reason that it is rare is the simple fact that we don't look for it when we should. But if enough sections of the myocardium are cut, they can be found quite regularly.

HEMORRHAGE SITE

"Sections from the brain show a lesion composed in part of clotted material, which resembles postmortem blood clot. There are some elements of fibrin. But around the borders of this lesion there is a heavy margin of connective tissue, a glial reaction. One would wonder whether or not this was an area of softening brought about by an embolus, into which there had been secondary hemorrhage which subsequently became encapsulated by fibrous tissue. It does not have all of the features of an abscess that one likes to think about but, generally speaking, abscesses tend to become encapsulated in this nature whereas infarcts tend to become liquified and be carried off by gitter cells. So one wonders whether or not this might have been originally a septic infarct which became the site of secondary hemorrhage. This sequence of events might have provided a source for bleeding into the spinal fluid. There are other regions in the brain which appear to be much paler in staining, and represent definite areas of ischemic necrosis. Around such areas there is a considerable amount of brown pigment

which I presume is hemosiderin, indicating hemorrhage of some duration.

OCCLUSIVE MATERIALS

"In addition, in other sections of the brain one can find small vessels which are the site of occlusion by material similar to that in the heart and around these there is an intense inflammatory reaction composed of polymorphonucleus and small lymphocytes. She has apparently had, therefore, episodes in her brain just as she did in her myocardium. Sections from the spleen show an old area of infarction.

"There is also material, obviously derived from the aortic valve, lying in the lumina of several of the renal arterioles, but by and large her glomeruli look reasonably normal. There are scattered glomeruli in which there is fusion and obliteration of the glomerular capillaries, suggesting that they have been the site of previous occlusion.

BLEEDING EPISODE

"We did not find any explanation for her intestinal bleeding episode. One might speculate, as you have done, Dr. Blake, that it was perhaps the site of a local vascular occlusion with an area of necrosis which has since undergone repair. Similarly, we did not find any lesions in her liver of any significance which would explain the changes in prothrombin. So we are left then, with a patient who has at least to us, not very good evidence of rheumatic involvement of the mitral or aortic valve, but who has bacterial endocarditis with numerous complications brought about by emboli, one of which probably accounts for her terminal episode by occluding one of the major branches of the coronary arteries. Do you have any other comments, Dr. Blake?"

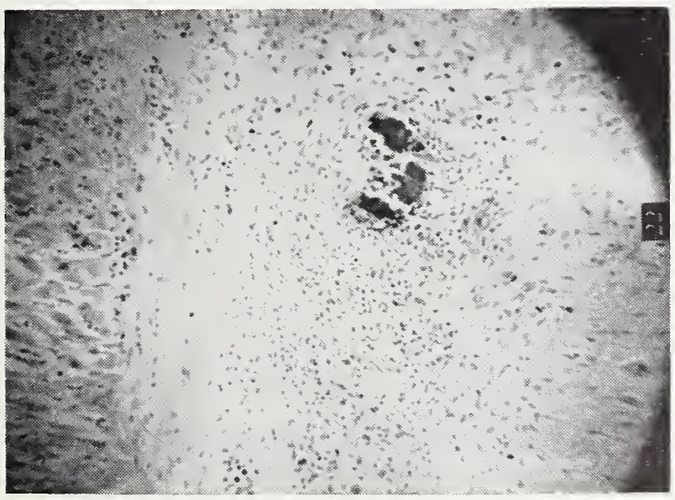

Figure 2. Section from the myocardium.

NO PRIOR HEART DISEASE

Dr. Blake: "I think I am most surprised by finding no evidence of pre-existing heart disease. Subacute bacterial endocarditis, that due to Strep viridans, complicates pre-existing heart disease in perhaps 80 or 90 per cent of the cases. This leaves 10 or 20 per cent of cases in which it occurs in previously normal hearts and this apparently was simply one of those. The information about the embolism into the small intramyocardial arteries is new. I didn't know it. This will explain the electrocardiographic changes. You pointed out that this had been going on for some time and apparently these were not part of the acute terminal episode alone. One would never have thought to attribute her nonspecific electrocardiographic changes to such a phenomenon as this—though they are explained perfectly well by what you have shown. So her terminal episode was coronary embolism after all."

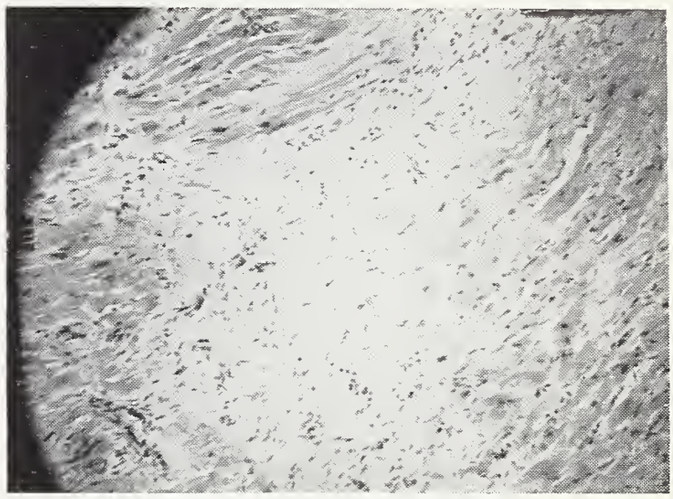

Figure 3. Lesions of the heart muscle.

PULMONARY FACTORS

Dr. Brunson: "The other thing that we did not find was any evidence of pulmonary embolism. It is entirely possible that it might have disappeared in the interval in which it was supposed to have happened and the time that she died. Unless there is prior embarrassment of the pulmonary circulation in general one is not apt to get an infarct if there is an embolus. I presume that if she had an area of localized edema or hemorrhage this may have disappeared. Are there any other comments? Dr. Allison, do you have anything to add?"

Dr. Allison: "We had hoped to achieve a bacteriological cure, but I am not so certain this was accomplished in view of the microscopic findings. This may not be surprising in light of the high level of resistance shown by the organism recovered from blood cultures since our best results have been in cases with more sensitive strains of streptococci."

Dr. Brunson: "Dr. Jackson has an additional comment."

Dr. Jackson: "With respect to the terminal episode of this illness, all that was written in the chart on this particular case was that the patient was dead when she arrived. This is of particular interest to me at the present time because Dr. Allison and I are currently reviewing our experience here with bacterial endocarditis. As an aside, I thought you might be interested in the fact that since this hospital opened we have had 41 cases of bacterial endocarditis that have been proved either by adequate recovery of the organism by blood culture, or else by autopsy findings. Of these 41 cases, 11 died during the illness and six more died later of complications, after having had a cure from the bacterial disease itself."

Dr. Brunson: "It seems to me that this is about the fourth case of bacterial endocarditis that we have had in the past 6-8 months, all of which have had evidence of coronary emboli." ★★★

2500 North State Street

MEDICAL POPULATION SHIFT

Preliminary results of the 1960 census point to three trends in the medical population. According to *Medical World News:*

. . . Doctors continue to flock to the big urban centers. While population of the 50 largest cities increased only 5 per cent since 1950, the physician population rose by 23 per cent. Outside the big cities, the figures were reversed: Doctors increased by 5 per cent, as against a 23 per cent jump in population.

. . . As expected, the number of physicians swelled most rapidly in the booming cities of the South, Southwest, and Pacific Coast. But in many of these areas the population expansion has so outstripped medical growth, that doctors are scarcer than ever.

. . . Despite population declines in the big Eastern and Midwestern cities, the physician population has increased. Only Newark, N. J. has fewer doctors than in 1950.

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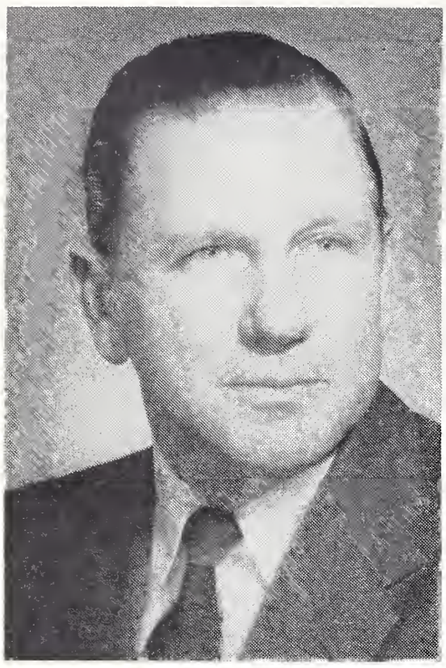

The President Speaking

'Interpret, Please'

G. SWINK HICKS, M.D.
Natchez, Mississippi

NOBODY LIKES TO BUY SOMETHING he doesn't want but some Americans will cheerfully mortgage their eyeteeth to purchase things they want but do not necessarily need.

Let's be just this candid and take a look at the costs of medical care. A very few physicians may prefer to look the other way, but most doctors are interested in looking at the picture realistically and practically—not in a selfish context but from the viewpoint of the care-consuming public to whom they are ethically obligated. When the facts are on the table, the costs of medical care need little defense but they desperately need fair, dispassionate interpretation. First, let it be clearly understood that a vast majority of physicians want to charge only a just, equitable fee for their services. The rarely seen, infrequently occurring doctor who is unreasonable in his charges must answer to his professional peers as well as the public.

A segment of patients served seem to resent paying for professional services as well as drugs, hospital care, and other health services. Perhaps these are the people caught not so much by the high cost of living as they are the costs of living high. When sickness comes, they may resent paying for care based upon three reasons: First, they are forced to buy something they didn't want; second, they must make an unplanned purchase; and third, they are thereby denied a more pleasurable expenditure. Now just what are the facts?

In 1955, Americans spent $3 billion on doctor bills and $9 billion on alcoholic beverages. Their tobacco bill was $5 billion while the hospital tab came only to three. More than twice as much went for barber and beauty services than for drugs and there was a cheerful outlay of $13 billion on recreation—more than twice all combined health care costs.

But in six years—from 1945 to 1951—the cost of penicillin decreased 99 per cent and in one year, ACTH and cortisone

(Turn to page 630)

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MISSISSIPPI STATE
MEDICAL ASSOCIATION

Volume I, Number 11

November 1960

Medicine's Private Helping Hand

W. E. CALDWELL, M.D.
Baldwyn, Mississippi

CAN YOU IMAGINE a business endeavor, essential to the nation, which experiences a $10 million annual deficit, takes in only $18 on sales for every $100 it spends, supplies a product without which man cannot survive, and—in spite of this economic adversity—is committed to an unprecedented expansion program? This is the true story of 85 American medical schools, an oversimplification of their common financial plight, and a glimpse at their genuine need for voluntary support by Mississippi physicians.

Medical education is one of our last free institutions. No federal statute or court decree governs a preclinical curriculum. No federal bureau prescribes the academic program of a clinical department. No agency of government says who shall be admitted for instruction. Seldom, if ever, is the excellence of American medical education questioned.

But just how long can this philosophy of freedom prevail against an economic impasse? Without the American Medical Education Foundation —medicine's private helping hand for the schools —not very long. Through AMEF, American physicians have given $7 million since 1951. Last year, the program hit a stride of a million annually. This, obviously, is progress but it must be accelerated. The alternative is unpleasant to contemplate because it is federal funding of medical education.

Although the United States is in an era of unbelievable prosperity, our institutions of higher learning remain victims of a cruel cost-price squeeze. Their plant and operating expenses mount while revenues lag. Private philanthropy is becoming less and less a key factor in education finance because of confiscatory taxes. The pattern of giving has changed: What was once the opportunity of the few is now the responsibility of the many. AMEF is geared to this challenge.

Contributions to medical education through AMEF are fully tax deductible and 100 cents of every dollar given goes to the school of the physician-donor's choice when he so specifies. Fund raising expense is borne by the American Medical Association and participating state medical associations. Dollar distribution to medical schools from this source is truly a no-string supply of needed money. It strengthens the free character of the institutions because it denies a need for federal funding. Moreover, AMEF documents the profound concern of physicians for expanded, improved medical education, another way of expressing concern for the expansion of quality medical care for all Americans.

Chairman, Committee on American Medical Education Foundation, Mississippi State Medical Association.

Our Mississippi campaign has begun and each member of the association is asked to consider this worthy project. In addition, the innovation of a joint appeal in behalf of the University of Mississippi School of Medicine is being made. Every Ole Miss medical certificate alumnus and graduate of the four year program will wish to respond, as will many alumni of other schools.

Each physician has a challenge, an opportunity, and, indeed, a responsibility in this campaign. Perhaps it is more properly described as a crusade. Your check, however modest, is an eloquent documentation of your concern for medical freedom. Let's all be part of the strength in medicine's private helping hand. ★★★

West Main Street at Highway 45

How Safe Are Milady's Cosmetics?

I

For every dollar expended by the American public each year for purchase of physicians' services, the cash register at the cosmetics counter rings up two. Although milady is the principal consumer, she is by no means the exclusive market because cosmetic products show up in the hospital nursery on about the same timetable as the pediatrician's formula. There are he-man cosmetics, too, as surely as there are delicate, subtle preparations intended only for the mystic rite of making all feminity genuinely feminine. Nearly everybody is willing to concede that the cosmetic preparation—be it pediatric, feminine, he-man, or geriatric—is here to stay.

What concerns medicine about the myriad of substances with which people coat the skin, hair, and nails is neither expenditure nor objective. Rather, it's the effect of these animal, mineral, and vegetable concoctions on health. Thirty-six years ago, the American Medical Association resolved that legislation placing cosmetic preparations under the Food and Drug Act was desirable and that use of harmful ingredients in cosmetics manufacture should be prohibited.

During three decades following this action, AMA has shown similar concern on many occasions and even created a Committee on Cosmetics which functions effectively today. The movement may just now have come of age because a joint symposium on "The Scientist's Contribution to the Safe Use of Cosmetics" will be presented December 29 under the auspices of the AMA and American Association for the Advancement of Science at New York.

II

Compared with most home products, cosmetics as a group is a relatively safe class of chemicals, Conley writes. While the frequency of intolerance and untoward effects is low, it should be appreciated that cosmetic reactions are less likely to be reported than those from drugs because users are not ordinarily under medical supervision. When such effects are neither prolonged nor incapacitating, there is slim chance that either physician or manufacturer will ever know of their occurrence.

In a study of 15,000 reports of poisonings by the New York City Department of Health, cosmetics were a factor in only three per cent of the cases and these usually involved ingestion of the product—not exactly the recommended usage for hair tonic. Conley believes that adequate safety appraisal of cosmetics requires two separate sets of facts, toxicity data and usage information. Neither is readily available.

Since there are no universally recognized standards for measuring toxicity of chemicals, toxicological bases are continuously dynamic as new

"He'll be back."

knowledge and experience are acquired. Laws are generally insufficient in requiring proof of safety of a cosmetic preparation but since such safety could not always be judged on a basis of intrinsic toxicity alone, usage factors must also be considered. Of these, Conley lists four: Degree of exposure, extent of exposure, necessity for use, and possibility of misuse.

These data are necessary for proper scientific investigation. Should manufacturers of cosmetic products ignore valid scientific conclusions as to toxicity and other harmful effects, then appropriate regulatory measures may be a desirable resort in the interest of the public health.

III

Ingredients used in the manufacture of cosmetics range from lifesaving drugs to street paving materials. Even some so-called inert ingredients are highly suspect of being carcinogenic agents. The literature is replete with reports and opinions of respected investigators who appear to have adduced considerable reason for concern ever milady's beauty aids.

Case in point: Use of antibiotics in deodorants. Nelson and Sulzberger contend that except for the reduction of axillary odors, there is no evidence that constant degerming of the skin would necessarily occur with widespread use of antibiotics in cosmetics. They demonstrate instances of sensitization, irritation, and toxicity resulting from application of antibiotic cosmetics and warn that indiscriminate use—even if not harmful—may induce development of acquired microbial resistance.

Case in point: Use of certain dyes in lipsticks. Seven of 17 coal tar dye colors used in lipsticks were found to be injurious to laboratory animals when fed in amounts constituting 0.25 to 2.0 per cent of the diet. The remaining 10 are closely related to these seven in chemical structure.

Cheilitis caused by lipstick is not uncommon where staining agents employed are eosin dyes or halogen derivatives of fluorescein. These are believed to be frequent photosensitizers. Lipsticks not containing these agents are said to be nonindelible and to possess minimal lasting capacities. Thus, milady will more likely than not buy herself an eosin loaded preparation.

Case in point: Use of inorganic iodine in nail polish. Allen writes that physicians using radioactive iodine in thyroid evaluation studies should be alert to nail polishes containing iodides. Several patients were observed to have apparently absorbed sufficient quantity of this contaminant to elevate the protein-bound iodine level as well as to depress the thyroid uptake.

Case in point: Use of synthetic resins in hair sprays. Edelston reports in *Lancet* that a 26 year old female developed cough, malaise, and loss of energy and appetite for a period of one year. Chest radiography disclosed appearances of bilateral hilar adenopathy and diffuse mottling in the mid and lower zones of both lung fields, later proved to have resulted from inhalation of hair spray. The suspected provocative agent was macromolecular synthetic resins used as fixatives. These cannot be metabolized by the body.

IV

The evidence is more than circumstantial and however inconclusive it may seem from a statistical viewpoint, it should not be ignored. The concern of the American Medical Association and the American Association for the Advancement of Science is proper and timely. These observations constitute no clarion call for extensive governmental controls or undue regulation of cosmetics manufacture. But they do invite attention to an apparent health hazard and the responsibilities shared by all knowledgeable interests. More succinctly stated, milady should be safely beautiful. —R. B. K.

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A Political Campaign—Journal Style

JOURNAL MSMA moves into politics in a big way in this issue with its own private "get out the vote" campaign. For the benefit of the physician readership, a detachable election placard has been inserted in the front advertising forms. Loosely interpreted, it reads, "The doctor has gone to vote, you go too."

The editors and staff of the JOURNAL sincerely hope that you will find time to use the placard. Vote as you please—but please vote.—B. M.

PERSONALS

JIM BARNETT, Brookhaven, freshman member of the Mississippi Aeronautics Commission, represented Mississippi at the annual convention of the National Association of State Aviation Officials held in Jackson Hole, Wyoming, in September.

JULIAN C. BRAMLETT, son of the late Dr. E. S. Bramlett and grandson of the late Dr. A. C. Bramlett, has opened his offices in his hometown of Oxford. Dr. Bramlett was graduated from the University of Pennsylvania School of Medicine, interned at Baptist Hospital in Memphis, and has just completed four years of surgical residency at John Gaston Hospital.

L. W. BROCK, Meridian, served as the president of the Pike County Fair Association. The fair, which was held recently, was judged "a big success" by Dr. Brock and other members of the association.

WALTER COLBERT, Natchez, was featured speaker at the September meeting of Wilk-Amite Medical Society. His subject was "Cobalt Treatment for Cancer."

JOE S. COVINGSTON, Meridian, will head the 1960 Christmas Seal Campaign of the Lauderdale County Tuberculosis Association, which opens Nov. 14.

R. J. FIELD, JR., Centreville, presided over the recent meeting of Oschner's Surgical Society in New Orleans. Dr. Field is president of the society.

R. G. HENDRICK, Okolona, has been named a member of the Okolona Municipal Separate School District Board of Trustees.

PATRICK R. HUNTER recently joined the Gamble-Archer clinic in Greenville. Dr. Hunter received his M.D. degree from Louisiana State University School of Medicine and served his internship and surgical residency at Charity Hospital, New Orleans.

RAYMOND S. MARTIN, JR., Jackson, and his wife were recently featured as the "Pride of Northside" by the *Northside Reporter,* Jackson neighborhood newspaper.

H. S. RAYNER AND RICHARD RILEY, Meridian, were named directors of the Lauderdale County Cancer Society in a recent election.

RICHARD E. SCHUSTER, Brandon, has been appointed Rankin County Civil Defense director. The appointment was made by the Rankin County Board of Supervisors.

THOMAS V. STANLEY, JR., has announced the opening of his office for the practice of general and thoracic surgery in Greenwood.

MARION M. WINKLER, JR., has opened office in Tupelo for the practice of pediatrics.

HOMER A. WHITTINGTON, Natchez, potentate of Wahabi Temple, reigned over the recent Fall Shrine Ceremonial held in Natchez.

LETTERS

SIRS: In the September 1960, issue there is an editorial by Dr. Arthur Guyton praising Dr. David S. Pankratz, who has resigned effective in January 1961, as dean of the University of Mississippi Medical School. Dr. Guyton is perhaps better qualified than any other member of the faculty to write such an editorial since he has known Dr. Pankratz longer than most of the rest of the faculty. There is little I would add, other than a wholehearted endorsement of Dr. Guyton's statements. It is my opinion that Dr. Pankratz's kindness and sincerity and the obvious all-out effort he has put into the deanship has gone a long way toward bringing the school to its present development. Particularly is this true in terms of the medical school's relationship with the public and the legislature, with both of whom Dr. Pankratz has a deservedly excellent reputation.

Also in the same issue is a highly idealistic editorial by "TJM," almost a sermon, on the importance of the deanship at the University of Mississippi. It should be read by all; then TJM and all other interested individuals should go about finding ways to entice and retain such a person as he has described. Perhaps we can arrange for a few kind words to be said concerning the new dean before he approaches retirement. Fulfillment of the tasks assigned to him by TJM should bring him some tangible acknowledgments—not just those "heavenly rewards" he might anticipate receiving. Finding such a man now for the deanship might also be easier if he could at least hope for some more immediate and sustaining evidence of appreciation than a "gold watch" on retirement.

FLOY JACK MOORE, M.D.
PROFESSOR AND CHAIRMAN
DEPARTMENT OF PSYCHIATRY
UNIVERSITY OF MISSISSIPPI SCHOOL OF MEDICINE
JACKSON, MISSISSIPPI

Book Reviews

Diseases of the Newborn. By Alexander J. Schaffer, M.D., associate professor of pediatrics, the Johns Hopkins Medical School, with a section on Neonatal Cardiology by Milton Markowitz, M.D., assistant professor of pediatrics, the Johns Hopkins Medical School. Cloth, 878 pages. Philadelphia: W. B. Saunders Company, 1960. $20.00.

The knowledge of the newborn which has rapidly accumulated over the past 10 years has made the appearance of such a book as this inevitable and necessary. The book itself reflects, in its practical clinical approach, the more than 30 years' experience as a clinician and teacher of the senior author. It contains an unusually large number of excellent photographs and drawings. The many well-chosen case reports are of great value in organizing the textual material for clinical applications.

The section on Disorders of the Respiratory System is particularly useful and complete. Dr. Markowitz's section on Disorders of the Cardiovascular System is excellent. It should help more physicians make the early and accurate diagnoses which are becoming necessary if our patients are to have the benefit of the latest developments in treatment of these disorders.

There are four appendices: Principles of Full-Term and Premature Infant Care in Nurseries, Resuscitation in Obstetrical Delivery Room, A Plan for the Management of Newborn Infants With Suspected Erythroblastosis, and Pharmacopeia for the Newborn Period. These appendices conveniently bring together information for which it has formerly been necessary to search through many different publications.

There are several puzzling omissions from the section on Disorders of the Skeletal System. Congenital torticollis is not mentioned, nothing is said about the various foot deformities found in the newborn, and there is no discussion of congenital amputation of the extremities.

The style of writing is unfortunately rather dull and the consistent and frequent use of the word "too" when "very" is meant is irritating.

This book will undoubtedly become one of the standard references in pediatrics and is recommended for students and practitioners.

H. C. Ricks, Jr., M.D.

Domestic Journals

Psychiatric Information for General Practice. Ralph R. Greenson: Calif. Med. 88:354-357 (May) 1958.

To his patients the physician is a very significant and emotionally highly charged figure and the attitude of the physician during the initial interview is therefore of considerable importance. In this interview, which should be unhurried and uninterrupted, something more than diagnosis must be attempted and the present and near future status of the patient must be appraised. The entire plan of procedure depends on this appraisal. For example, if the patient is in some state of equilibrium there is time to see him several times before arriving at any definite conclusions. If, however, there are signs of impending acute decompensation, then it is imperative that the patient secure early specialized treatment. In appraising this possibility a crucial indicator is the patient's impulse control balance during the course of the interview. If the patient begins to lose control and to pour out material impulsively, then the physician must take control and probing questions should be avoided. In the determination of whether or not the patient is treatable by the general practitioner, factors other than diagnosis have to be considered—factors such as the patient's financial resources, his motivations, and the availability of psychiatric help.

In working with disturbed patients the physician's demeanor is of particular importance. His face should ideally have the ordinary human reactions of an interested, involved, yet objective observer, and the patient must be provided with an atmosphere of acceptance, empathy, and security. Anxious patients in particular need time and encouragement to express their anxieties. For reassurance to be effective it should not be overdone and should only follow a careful hearing and study of the problem. False reassurance should never

be given. If the physician has doubts and misgivings, he should explain to his patient the need for further investigation before expressing an opinion. Depressed patients, usually full of undischarged and turned-in hostility, do not respond well to a happy-go-lucky, cheerful attitude on the part of the physician. Elderly patients are not as rigid as is commonly believed and many respond well to psychotherapy. A basic necessity is usually for the physician to be able to get the elderly patient to talk about his fear of death. Healthy older people should not be given all kinds of pseudo-activities but encouraged to continue activity with what really interests them, even if it does involve some hard work.

In giving marital advice, it is easy for the general practitioner to make mistakes by going to extremes in any of several directions. Such patients, usually anxious, embarrassed, and frightened, should be put at their ease in an informal, yet delicate, manner which avoids both sexiness and puritanism. In coping with problems of frigidity and impotence, it is necessary to differentiate between cases of long standing and those which may have a relatively simple structure. Extensive or hasty probing should be avoided and psychiatric referral should be considered in long standing cases where there is a reluctance to talk directly to the interviewing physician. In such cases the question of psychiatric referral should be introduced judiciously and never as a matter of urgency.

FLOY JACK MOORE, M.D.

How Adolescents Differ From Younger and Older People. J. R. Gallagher: Conn. Med. 22:-649, 1958.

Effective medical care of adolescents is "dependent upon a knowledge of the ways in which they and their ailments differ from children and adults and their disorders," emphasizes Gallagher. He notes, "One of the outstanding personality traits of adolescents is their unyielding overconcern with themselves." They are intent on developing their own personalities, resistant to efforts to force them into a mold, and disinterested in any adult who is not interested in them. The physician can deal with them effectively only if he recognizes their individual personality traits and pays just as much attention to them as to physical symptoms.

The physician can utilize to advantage his patient's preoccupation with himself. He must be more willing to listen than to advise; he must show respect for his patient as a young person trying to become adult. Real or imagined body defects or deficiencies "are charged with emotion for the adolescent; the same defects usually are of little concern either to the child or to the adult." Therefore, the doctor's examination should be thorough, private, and attentive to what may seem minor. The young person is often unduly concerned with rate and extent of sexual maturation. The girl who is taller or flatter-chested than her friend, or the boy who is underdeveloped or beardless will be worried. They need constant reassurance and continued interest. To allay their fears, they need to learn that not being average does not necessarily mean being abnormal.

Many adolescent anxieties and symptoms result from their conflicts about sex. "They need, and will benefit from, opportunities to talk about these worries to an understanding adult who will take them seriously and who will not be quick to criticize or to advise."

The adolescent's constant search for prestige and recognition from his contemporaries may re-

"Well, what's Mrs. Wilson's little boy here for?"

quire strenuous athletic activities.This may conflict with the doctor's prescription of rest, particularly where the patient presents cardiovascular problems, fatigue, or back pain. Unnecessary restriction should be avoided and replacement activity should be encouraged.

School is another source of anxiety and will frequently cause pain, headache, and other symptoms. Therefore, their school performance is an important part of their medical history.

The changing relationships between the adolescent and his parents, who may be possessive or fearful when the child seeks independence, are another cause of conflict. An upset home, questions about religion, death, and misbehavior of a hero also confuse and disturb them. "To foster independence, to help build confidence, to interpret the reasons for the parents' anxiety to these young people, and to persuade parents that their function is to produce an adult, not just a child, are important parts of the doctor's job." Adolescents, in trying to become independent, need acceptance and to be able to "turn to strong, stable, warm adults for whom they have respect and in whom they have confidence, and upon whom they can rely, but who will not dominate them."

In conclusion, Gallagher notes that adolescents have a great capacity for change, with their one constant characteristic "their unpredictability."

MARGARET BATSON, M.D.

The Management of the Suicidal Patient. Patrick B. Friel, and Ludwig M. Frank: Ann. Int. Med. 41:632-641 (Sept.) 1958.

It is always sound medical practice to treat the disease as well as the symptoms and the treatment of the suicidal patient is no exception. This problem is of concern to all physicians, regardless of type of practice, since the symptom is so widespread. Sixteen thousand suicides are reported in the United States each year, as well as approximately 100,000 suicidal attempts.

Man faces his greatest suicidal threat between the ages of 45 and 64, the involutional period. In this period the patient, faced with the feeling that life's task has been accomplished, sees no channel into which he can direct his energies. They are then directed against the self, and the result may be severe depression with strong suicidal potentialities. Suicides are relatively frequent in the depressed phase of manic-depressive psychosis and, among schizophrenics, tend to occur most often in the paranoid group.

In certain neurotics, suicides and attempted suicides are attention seeking devices. Sometimes a compromise is effected by sacrificing a part of the body such as a limb or eye or the genitalia in lieu of the whole organism. In some neurotics, anxiety reaches panic proportions in which the patient may kill himself impulsively to get rid of his extreme horror. Such patients should be heavily sedated and transferred to a protective hospital environment immediately, using physical restraint if necessary.

There are certain accident prone individuals whose objective of self-destruction is quite unconscious; they attribute their ill luck to fate and strongly deny any personal liability. Similarly, the diabetic patient who will not live within his reserve is committing suicide as surely as those who use more dramatic means. He, too, is not aware of his self-destructive goal. Such patients may require considerable psychotherapy before they can fully accept and appreciate what their behavior means. When the patient has gained such awareness, it is then the task of treatment to try to uncover the personality difficulties that are prompting this destructive solution.

There are no infallible indications of potential suicide, and each physician has to make his own judgment, depending upon available information. The warnings of the patient should always be treated seriously since, contrary to popular belief, as many as 40 per cent of patients talk about their suicide intent beforehand. A history of previous attempt, including physical signs, is always important. The patient's single denial of suicidal feelings should not always be taken at its face value and careful questioning is important. An outburst of anger or indignation at such questions is suspicious as is an increase in agitation or a flood of self-accusations.

In the management of the patient who has made a suicidal attempt, once the immediate emergency measures have been speedily attended to, the patient must be placed under constant observation so that further attempts can be prevented. It is well to remember that, in the ensuing period of relative calm the patient can again become actively suicidal. Somatic therapies such as electric convulsive therapy or drugs may be of short term value, but extended psychotherapy is desirable in effecting a resolution of the underlying causes of the suicidal attempt and in bringing about a more permanent personality equilibrium.

FLOY JACK MOORE, M.D.

MEETINGS

NATIONAL AND REGIONAL

American Medical Association, November 28-December 1, 1960, Washington, D. C., F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago 10, Ill.

American Academy of General Practice, April 13-20, 1961, Miami Beach, Florida. Mr. Mac F. Cahal, Executive Director, Volker at Brookside, Kansas City 12, Mo.

Southern Medical Association, October 31-November 3, 1960, St. Louis. Mr. Robert F. Butts, Executive Secretary, 2601 Highland Ave., Birmingham 5, Ala.

STATE AND LOCAL

Mississippi State Medical Association, May 9-11, 1961, Biloxi. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson.

Mississippi Chapter, American College of Surgeons, November 25, 1960, Jackson, Dr. Edward C. Hamilton, Suite 201-5 Hewes Building, Gulfport, Secretary.

Amite-Wilkinson Counties Medical Society, First Tuesday March, June, September, December. S. E. Field, Centreville, Secretary.

Central Medical Society, First Tuesday Monthly, 6:30 p.m., Robert E. Lee Hotel, Jackson, C. G. Sutherland, 918 N. State St., Jackson, Secretary.

Claiborne County Medical Society. D. M. Segrest, Port Gibson, Secretary.

Clarksdale and Six Counties Medical Society, Second Wednesday March and November, 2:00 p.m., Clarksdale, Robert R. McGee, 150 Yazoo St., Clarksdale, Secretary.

Coast Counties Medical Society, First Wednesday March, June, September, and November. Charles N. Floyd, 1412-23rd Ave., Gulfport, Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando, L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Monthly, 7:30 p.m., Natchez Country Club, Natchez, W. T. Colbert, Natchez General Hospital, Natchez, Secretary.

North Central District Medical Society, Second Wednesday March and September. W. A. Middleton, 214 Summit St., Winona, Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December, Tupelo, Eugene M. Murphey, III, 421 Main St., Tupelo, Secretary.

North Mississippi Medical Society, First Thursday January, April, and October, Oxford, R. L. Wyatt, Holly Springs, Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. George B. Stewart, 139 Kirkwood St., Picayune, Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. Thomas F. Puckett, 715 Arledge St., Hattiesburg, Secretary.

Tri-County Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg, Thomas H. Mitchell, The Street Clinic, Vicksburg, Secretary.

300 Attend Annual Meeting of State GP Academy; Dr. Vise Named President-elect by Acclamation

Dr. Guy T. Vise, Meridian, was elected by acclamation as president-elect of the Mississippi Academy of General Practice during a busy two-day meeting, Sept. 28 and 29.

Around 300 state GP's and their wives attended the assembly which featured seven scientific speakers, over 40 technical exhibits, and four scientific exhibits.

Speakers and officers confer as the Mississippi Academy of General Practice holds its 12th annual session. From left to right are Dr. W. C. Warner of Jackson, speaker; Dr. John T. Leckert of New Orleans, out-of-state speaker; Dr. J. P. Culpepper of Hattiesburg, program chairman, and Dr. R. J. Moorhead of Yazoo City, president of the state academy. (Photo courtesy of Ray Sadler, Jackson Daily News.)

Other officers named during the Jackson meeting were Dr. Eldon L. Bolton, Biloxi, vice president; Dr. John Roy Bane, Jr., Jackson, secretary-treasurer; Dr. John B. Howell, Canton, national delegate; Dr. John C. Longest, State College, alternate national delegate.

Opening on Wednesday, the Academy heard five scientific talks during the day with time out to visit the exhibits. During the morning session, Dr. William C. Warner, Jackson, spoke on "Athletic Injuries, Their Recognition and Treatment."

After lunch, Dr. H. B. Christianson, head of the department of dermatology, Oschner Clinic and Foundation Hospital, New Orleans, spoke on "Cutaneous Manifestations of Some Internal Diseases" and "Diagnosis and Treatment of Some of the Common Skin Diseases Seen by the General Practitioner."

Dr. I. Frank Tullis, chief of the division of medicine, University of Tennessee School of Medicine, discussed "Clinical Problems in Obesity." Dr. John T. Leckert, clinical instructor of medicine, Louisiana State University School of Medicine, New Orleans, talked on "Treatment of Hypercholesterolemia With Atherosclerosis Using MER 29."

During the Wednesday evening banquet, Porter F. Fortune, Ph.D., dean of the College and Graduate School of Mississippi Southern College, spoke on "Perspective 1960." The Mead Johnson Scholarship Award was presented to Dr. Hardy B. Woodbridge, Jackson.

Speaking to the Thursday luncheon, Dr. Lester D. Bibler, Indianapolis, Ind., warned, "Medicine must wake up and close ranks or it is all through as an independent profession." Dr. Bibler, delegate of AMA's Section on General Practice and chairman of the Medical Practice Committee, spoke on the subject "General Practitioner of 1970."

"The most important challenge for the GP of 1970 will be the economic extension of medical services into each level and every corner of human existence in an increasingly socialized society," he said.

He emphasized that doctors must retain the "common touch"—know the patient, and family and their means.

Earlier Dr. Bibler had addressed the morning session of the Academy on "Care of the Aged." Other morning papers were "Malignancies of the Uterus" by Dr. J. P. Greenhill, professor of gynecology, Cook County Graduate School of Medicine, Chicago, Ill. and "Experiences With Dissecting Aneurysm" by Dr. Tullis.

During the afternoon session Dr. Philip Thorek, professor of surgery, Cook County Graduate School of Medicine, spoke on "The Acute Abdomen in the Aged" and "If I Had an Ulcer." Dr. Greenhill presented an afternoon paper on "Practical Problems in OB-GYN."

Dr. Tom H. Mitchell, Vicksburg, assumed the presidency of the MAGP at the conclusion of the afternoon meeting. Dr. Robert J. Moorhead, Yazoo City, is outgoing president.

District directors elected during the September meeting are: two, Dr. J. P. Culpepper, Hattiesburg; four, Dr. Albert Gore, Jackson; six, Dr. Walter E. Johnston, Vicksburg; eight, Dr. S. Lamar Bailey, Kosciusko; 10, Dr. Lawrence H. Brisco, Tupelo.

Mississippians Meet With Vice President

The lady approves as Mr. Nixon greets Mr. Kennedy—MSMA's Rowland B., that is! Chatting with the Vice President during a Washington meeting last month are Mrs. Robert E. Shands, New Albany, wife of Dr. Robert E. Shands, and Rowland B. Kennedy, MSMA's executive secretary.

Scientific Exhibits Invited for 1961 Session

Prospective scientific exhibitors for MSMA's 93rd Annual Session, Biloxi, May 9-11, 1961, have been invited to submit space applications. This was the announcement of Dr. William E. Lotterhos, Jackson, chairman of the Council on Scientific Assembly, who said that ". . . first preference of limited space available in the scientific exhibit will be given members of the state medical association."

The exhibit will be located in the lobby and east lounge of the Buena Vista, headquarters hotel for the giant annual session, Lotterhos added. Admission will be limited to registered members and guests, since MSMA policy precludes opening scientific and technical exhibits to the general public. Other applicants eligible for consideration are out-of-state physicians and organizations and agencies having a valid function in the health service field.

"Interested applicants should apply now by letter to the association," Dr. Lotterhos said. "After initial screening, formal application forms will be furnished and a final selection of exhibits will be made by a special committee of the Council on Scientific Assembly during early January 1961."

He stressed that initial letters should state the subject of the exhibit, physician or organizational sponsors, and minimum space requirement. Letters should be addressed to the association headquarters at 735 Riverside Drive, Jackson.

MSMA members are eligible for the annual scientific gold medal award. Other exhibitors compete for citations of honorable mention. Ground rules prohibit mention of pharmaceutical or medicinal products by proprietary name in scientific exhibits. All booths must be attended during meeting hours by sponsors who are also responsible for erection and dismantling of exhibits.

Mississippi Surgeons To Meet Nov. 25

Mississippi surgeons and their guests will convene Nov. 25 in Jackson for the annual meeting of the Mississippi Chapter, American College of Surgeons.

Featured speaker for the meeting will be Dr. Harwell Wilson, Memphis, Tenn., who will talk on "Personal Experience in Surgery of Tumors of the Liver." Dr. Wilson is professor of surgery, University of Tennessee School of Medicine.

Besides Dr. Wilson's talk, two other papers will be presented during the afternoon's program. Dr. H. G. Langford, Jackson, will discuss "Hypertension Due to Renal Artery Occlusion," and Dr. W. N. A. Bell, Jackson, will speak on "The Newer Chemotherapeutic Agents for Tumor Control.

Final feature of the afternoon session will be a panel discussion on "Complications of Surgery." Dr. Curtis P. Artz, Jackson, will serve as moderator and panelists will be Drs. George F. Archer, Greenville; Bedford F. Floyd, Jr., Gulfport; W. H. Parsons, Vicksburg; Leslie V. Rush, Meridian; and Harwell Wilson.

Following the scientific program, a business meeting will be conducted. The annual meeting will conclude with a banquet.

Dr. G. Swink Hicks, MSMA president, is now serving as president of the Mississippi Chapter. Dr. M. M. Snelling, Handsboro, is president-elect, and Dr. E. C. Hamilton, Gulfport, is secretary-treasurer.

Southern Medical Holds Annual Meeting

The Southern Medical Association began its 54th annual meeting Oct. 31 in St. Louis.

The four-day meeting featured scientific sessions arranged by 20 sections of the association, and symposiums on "Cerebrovascular Disease" and "The Business Side of Medicine." The sessions were held in Kiel Auditorium where more than 200 scientific and industrial exhibits were on display.

Meeting concurrently with the Southern Medical were four scientific groups: The Southern Chapter of the American College of Chest Physicians, the American Society of Internal Medicine, the Southeastern Proctologic Society, and the Southern Gynecological and Obstetrical Society.

The Woman's Auxiliary to SMA also planned a full program including a business session, style show, and tours.

Approximately 150 Mississippi physicians and their wives attended the 54th annual meeting.

Health Service Releases Revised Program

The School Health Service has just released a revised edition of its proposed school health program for health departments and schools. The Service is under the direction of the State Board of Health and the State Department of Education.

The foreword states that the purpose of the manual is "to serve as a guide in planning and executing the school health program." At present the suggested program is being carried out in most of the 82 counties of the state.

Copies of the manual may be obtained from the Mississippi School Health Service, Jackson, Mississippi.

Flying Docs Learn About SAC

Several members of the Flying Physicians Association spent Sept. 10 at the Columbus Air Force Base learning about the Strategic Air Command.

The doctors and their wives flew into Columbus for a day's briefing on the activities and purpose of SAC. Members attending were Drs. Jack Daniel, Hattiesburg, chairman; Dr. James L. Royals, vice chairman; Norman W. Todd, Newton; Albert Bryan, Meridian; Billy Riley, Meridian.

Branyon Appointed State ACS Director

Max Branyon has been appointed executive director of the Mississippi Division, American Cancer Society, according to Dr. D. S. Pankratz, president of the Division.

Branyon succeeds Richard N. Satterfield, who resigned as director to take a position in his native state of Tennessee. The appointment was made by the Division Personnel Committee, acting under the authority of the Board of Directors.

A native of Alabama, Branyon attended Auburn University and received his B.A. degree from Northeastern College in Oklahoma. He has just completed work leading to a master's degree.

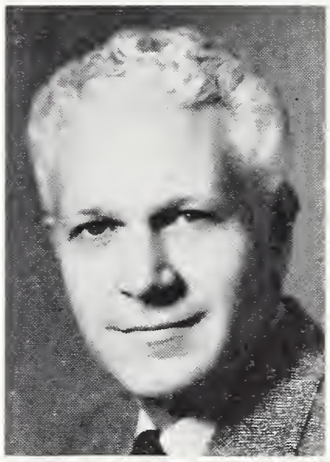
Branyon is currently with the American Cancer Society and his past experience includes serving as regional director of the Muscular Dystrophy Association.

He will assume his duties with the Mississippi Division on Nov. 1.

Moorhead Named AAGP President

Dr. Robert J. Moorhead, Yazoo City general practitioner, was inaugurated president of the Association of American Physicians and Surgeons at the group's recent meeting in St. Louis.

Dr. Moorhead served as president-elect of AAPS during the past year and has been national essay chairman for the past two years. The association met in annual session Sept. 29-Oct. 1



Moorhead

Asked about the group's aims for the coming year, Dr. Moorhead said, "We are in the process of doing all we can to preserve quality medical care and medical freedom for physicians and their patients."

He explained that the AAPS was primarily concerned with conducting an educational campaign against the elements of socialism and labor. Dr. Moorhead said that the association planned to increase the amount of literature on libertarian views that is now available to AAPS members and medical students.

"We are trying to preserve the free practice of medicine by giving doctors and students a source of material in favor of free enterprise to combat the abundance of labor material in favor of socialism," he said.

Dr. Moorhead said that AAPS was also campaigning against socialism through its annual essay contest. The contest, conducted nationally, encourages high school students to write on the subject "The Advantages of Private Medical Care."

In addition to holding the top office in AAPS, Dr. Moorhead is presently serving as chairman of MSMA's Section on General Practice and Committee on Federal Medical Services. He is a past president of the Mississippi Academy of General Practice and the Central Medical Society.

Clinical Meeting to Feature New Developments, Diseases

Physicians attending AMA's 14th Clinical Meeting will view scientific presentations in color TV, honor President Eisenhower's personal physician, and participate in policy-making.

The meeting, planned around the theme "New Developments in Old Diseases and Old Developments in New Diseases," will be held in Washington, D. C., Nov. 28-Dec. 1.

According to Dr. E. Vincent Askey, AMA president, the clinical meeting is designed "as a sort of postgraduate course in medicine, to provide the doctor with all the major scientific advances under one roof."

A scientific highlight of the 1960 program will be a series of six one-hour television presentations from Georgetown University Hospital. These color telecasts will feature dermatology, pediatrics, emergency treatment of major injuries, and newer methods in surgical handling of peptic ulcer, orthopedics, and pathology.

On Nov. 28, Major General Howard McC. Snyder, M.C., USA, will be the guest of honor at the House of Delegates dinner. Gen. Snyder has been personal physician to President Eisenhower since the President's inauguration in 1953.

The program for the 14th Clinical Meeting includes two unusual features. For the benefit of attending physicians, proponents of different managements of controversial medical problems will debate. To get the patient's side of things, a panel of six nonphysician participants will talk about their experiences with coronary disease.

All scientific sessions will be held at the District of Columbia National Guard Armory. Three sections will run simultaneously morning and afternoon for the four days of the meeting.

Exhibit-wise, over 225 displays will be presented as a part of the clinical program. Approximately 125 exhibits will make up the Scientific Exhibit, while over 100 displays will be included in the Industrial Exhibition.

During the meeting, the House of Delegates, AMA's policy-making body, will hold its sessions at the Sheraton Park Hotel. Although only delegates are permitted to speak from the floor, all AMA members are invited to attend the sessions. Reference committee meetings will be conducted all day Tuesday, Nov. 29, during which any AMA member may express his views on the issues under discussion. Leading MSMA's official delegation will be Dr. G. Swink Hicks, Natchez, president; Drs. J. P. Culpepper, Hattiesburg, and John F. Lucas, Greenwood, AMA delegates, and Dr. George E. Twente, Jackson, alternate AMA delegate. A substantial number of Mississippi physicians plan to attend.

Gray Heads March of Dimes Campaign

Dr. A. L. Gray, state health officer, will lead Mississippi volunteers in the 23rd annual March of Dimes fund campaign set for Jan. 2-31, 1961. Owen Cooper, industrialist of Yazoo City, will serve as associate chairman.

The appointments were announced by Basil O'Connor, president of the National Foundation. This is Dr. Gray's third year to head the campaign and Cooper's seventh year as associate chairman.

In accepting the appointment, Dr. Gray paid tribute to March of Dimes volunteers for another great achievement in developing the live-virus polio vaccine which was recently declared suitable for use by the U. S. government. Dr. Albert B. Sabin, the scientist who developed the live-virus vaccine, has been a March of Dimes grantee since 1940.

The new live-virus, Dr. Gray pointed out, is not expected to be available before next spring. Meanwhile, he urged continued wide-use of the Salk polio vaccine also developed with March of Dimes funds.

The objectives of the 1961 new March of Dimes are prevention of birth defects, arthritis, and polio.

Commenting on these, Dr. Gray said, "Birth defects are the largest unmet childhood medical problems in the United States today. Arthritis is the No. 1 crippler, disabling more people than any other chronic disease. And the New March of Dimes still must aid polio patients, support its famed virus research program, and campaign for universal vaccination."

Medical Librarians Meet in Jackson

The Southern Regional Group of the Medical Library Association met in Jackson for its 10th annual meeting Oct. 21-22.

Hosts for the event were the Rowland Medical Library of the University Medical Center represented by Miss Irene Graham; the Mississippi State Board of Health library represented by Miss Louise Williams; the Veterans Administration library, represented by Mrs. Martha Howard.

Friday's activities included a panel discussion on "Training for Medical Librarianship," a tour of the Vicksburg National Military Park, and a banquet. Dr. Walter E. Johnston, Vicksburg, was the banquet speaker.

The meeting was concluded with a business session Saturday morning.

Medical librarians from twelve Southern states attended the meeting. Mrs. Ruth Baxter of the VA Center Library in Jackson is secretary-treasurer of the Southern Regional Group.

New Orleans Assembly Plans Meeting, Orient Tour

The 24th annual meeting of the New Orleans Graduate Medical Assembly will be held March 6, 7, 8 and 9, 1961, with headquarters at the Roosevelt Hotel.

Nineteen outstanding guest speakers will participate and their presentations will be of interest to both specialists and general practitioners. The program will include 57 discussions on topics of current medical interest, in addition to clinicopathologic conferences, symposia, medical motion pictures, round-table luncheons, scientific exhibits, and technical exhibits.

Following the meeting in New Orleans, arrangements have been made for a clinical tour to the Orient leaving New Orleans via air on March 10, to make a connection with jet flight leaving Los Angeles at night. The itinerary includes visits to Hawaii, the Philippines, Hong Kong, and Japan, returning on March 30 to gateway city of choice—Los Angeles, San Francisco, or Seattle. Optional extensions may be arranged.

Details of the New Orleans meeting and the tour are available at the office of the Assembly, Room 103, 1430 Tulane Avenue, New Orleans 12, La.

Glare Harder On Eyes After 40

The effect of glare on vision increases sharply after the age of 40, according to an article in the October *Archives of Ophthalmology,* published by the American Medical Association.

Ernest Wolf, Ph.D., Boston, reported on a study of glare and age in more than 200 persons ranging from five to 85 years old.

The visibility of objects is reduced in the presence of glare, particularly in the vicinity of a blinding glare source, he said. To overcome the loss of visibility the contrast between figure and ground must be enhanced, or the size of the object seen must be increased, he said.

In his study, the illumination of the object was increased.

"This increase necessary for the recognition of the targets becomes progressively greater as age increases," Dr. Wolf reported.

"Comparing individuals in the age range between five and 15 years with those in the range between 75 and 85 years, a 50 to 70 fold increase in target screen luminance is necessary for the latter group as compared with the former.

"At the age of 40 years a sudden acceleration in sensitivity to glare occurs."

Since glare varies with age, he said, it is apparent that the phenomenon occurs within the eye. Studies suggest that the increased opacity of the lens which develops with advancing age and the resulting scatter of light within the eye "is primarily responsible for the phenomenon of glare," he said.

17 Speakers Scheduled For Texas Meet

Seventeen speakers will be featured at the 25th Annual Session of the International Medical Assembly of Southwest Texas. The meeting is scheduled for Jan. 23-25, 1961, in San Antonio.

Further information may be obtained from S. E. Cockrell, Jr., executive secretary, 202 West French Place, San Antonio 12, Texas.

The following physicians have been elected to membership by their respective component medical societies in the Mississippi State Medical Association and the American Medical Association:

GONZALEZ, DANIEL GONZALEZ, Lucedale. Born Mexico, Distrito Federal, Dec. 11, 1922; M.D., National Faculty of Medicine, University of Mexico, Mexico, Distrito Federal, 1949; interned North Louisiana Sanitarium, Shreveport, La.; general practice residency, Escambia General Hospital, Pensacola, Fla., 1 year; elected June 10, 1960, by South Mississippi Medical Society.

MCBROOM, ROBERT DAVIS, III, Centreville. Born Canton, Miss., April 28, 1932; M.D., University of Mississippi School of Medicine, Jackson, June 8, 1959; interned Mississippi Baptist Hospital, Jackson; elected July 1, 1960, by Amite-Wilkinson Counties Medical Society.

MOORE, WILLIAM STONEHART, Olive Branch. Born Fort Worth, Texas, August 21, 1926; M.D., University of Tennessee School of Medicine, Memphis, June 15, 1959; interned University Memorial Hospital, Knoxville, Tenn.; member American Academy of General Practice; elected Sept. 15, 1960, by DeSoto County Medical Society.

RATCLIFF, JAMES CHARLES, Brooksville. Born Meridian, Miss., Nov. 5, 1931; M.D., Northwestern University, Evanston, Ill., June 18, 1956; interned Baroness Erlanger Hospital, Chattanooga, Tenn.; general practice residency Matty Hersee Hospital, Meridian, Miss., three months; Captain, U. S. Air Force, two years; elected June 7, 1960, by Northeast Mississippi Medical Society.

BOUNDS, GEORGE WILLIAM, Meridian. M.D., University of Nashville, Nashville, Tennessee, 1906; EENT residencies, New Orleans EENT Hospital and Chicago EENT Hospital, one year; emeritus member MSMA; member Fifty Year Club of MSMA; member Louisiana-Mississippi O & O Society; Lieutenant, U. S. Army, 1918-1919; died at Anderson Infirmary, Meridian, Sept. 18, 1960, aged 77.

BROWN, HARVEY LEE, Laurel. M.D., Leonard Medical School, Raleigh, N. C., 1915; died Jan. 12, 1960, aged 84.

dropped 25 per cent. From 1935 to 1955, the drug portion of the health care dollar dropped from 21 down to 15½ cents while the physician's part went from 32 to 27 cents. Only the hospital share increased. Yet the really important aspect to remember is that the 1960 medical care dollar buys drugs and services which couldn't be had at any price in 1935.

Take lobar pneumonia, for example. Half the membership knows personally that in 1928 it put the patient in the hospital for four to six weeks and mortality was about 33 per cent. With loss of earnings, care costs were as much as $1,000 for those who survived. In 1960, lobar pneumonia has a duration of one to two weeks and seldom requires hospitalization. Antibiotics cost from $15 to $30 for adequate care and the physician's fee is notably less than it was in 1928—even in presently inflated dollars. The mortality now is about 3 per cent.

As recently as 1940, a Boston hospital reported over 300 mastoid abscesses in children. Surgery was painful with long aftercare and hearing impairment was not an infrequent complication. Because of antibiotics, some young physicians today have never seen such an operation.

For comparison of real health care costs, look at the story of Walter and Tom Jones, fictional twin brothers, present age 50. Walter had his appendix out recently. He paid a higher hospital bill than did his brother Tom in 1935 for the same operation. Too, Walter paid for drugs unknown at the time of Tom's surgery. The difference: Tom was hospitalized three weeks but Walter, only five days. Walter paid a slightly higher professional fee and greater per day hospital costs. Both earned about the same income in terms of purchasing power at the times of their respective surgery. But Walter's total costs in 1960 were actually less than his brother's some 25 years previously.

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Ob-Gyn Board Schedules Exams

The American Board of Obstetrics and Gynecology has announced that its next examination (Part I, written) will be held Jan. 13, 1961.

Candidates applying in 1960 for the 1961 examinations are not required to submit case reports, according to Robert L. Faulkner, M.D., executive secretary and treasurer. However, they must keep a duplicate list of hospital admissions as furnished with their application. This list must be submitted at the annual meeting in Chicago should they become eligible to take the Part II, oral, examinations.

Reopened candidates will be required to submit case reports for review thirty days after notification of eligibility. Those candidates scheduled for Part I and those resubmitting case reports must have them in by August 1 each year.

Current bulletins may be obtained by writing Dr. Faulkner, 2105 Adelbert Road, Cleveland 6, Ohio.

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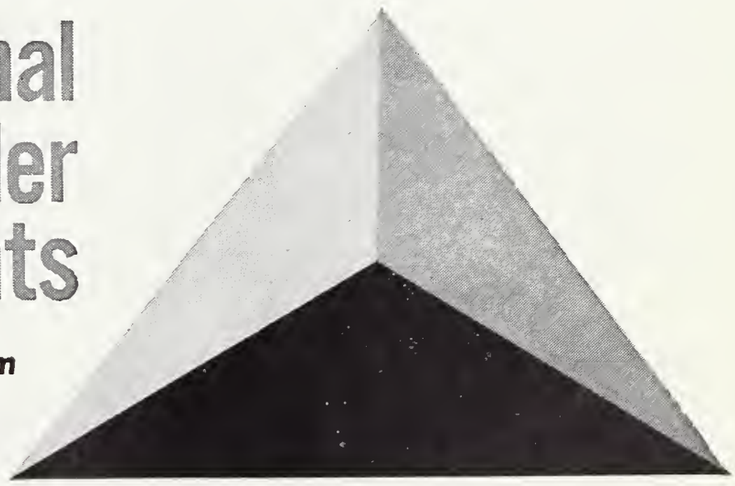

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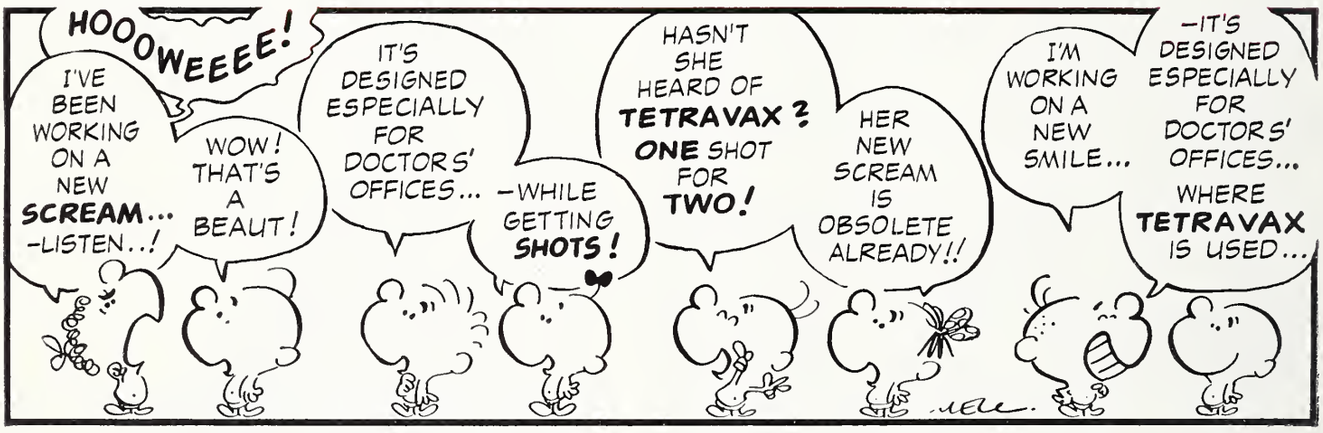

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One outstanding advantage of triamcinolone is that it rarely produces edema and sodium retention.[1,2]

The clinical importance of this property cannot be overemphasized in treating certain types of patients. McGavack and associates[3] have reported the beneficial results with ARISTOCORT in patients with existing or impending cardiac failure, and those with obesity associated with lymphedema. Triamcinolone, in contrast to most other steroids, is not contraindicated in the presence of edema or impending cardiac decompensation.[3]

Hollander[1] points out the superiority of triamcinolone in not causing mental stimulation, increased appetite and weight gain, compared to other steroids which produce these effects in varying degrees. And McGavack,[2] in a comparative tabulation of steroid side effects, indicates that triamcinolone does not produce the increased appetite, insomnia, and psychic disturbances associated with other newer steroids.

ARISTOCORT can thus be advantageous for patients requiring corticosteroids whose appetites should not be stimulated, and for those who are already overweight or should not gain weight. Likewise, ARISTOCORT is suitable for the many patients with emotional and nervous disorders who should not be subjected to psychic stimulation. Furthermore, ARISTOCORT Triamcinolone, in effective doses, showed a low incidence of side reactions and is a steroid of choice for treating the older patient in whom salt and water retention may cause serious damage.[2]

References: 1. Hollander, J. L.: *J.A.M.A.* 172:306 (Jan. 23) 1960. 2. McGavack, T. H.: *Nebraska M. J.* 44:377 (Aug.) 1959. 3. McGavack, T. H.; Kao, K. Y. T.; Leake, D. A.; Bauer, H. G., and Berger, H. E.: *Am. J. M. Sc.* 236:720 (Dec.) 1958.

Precautions: Collateral hormonal effects generally associated with corticosteroids may be induced. These include Cushingoid manifestations and muscle weakness. However, sodium and potassium retention, edema, weight gain, psychic aberration and hypertension are exceedingly rare. Dosage should be individualized and kept at the lowest level needed to control symptoms. It should not exceed 36 mg. daily without potassium supplementation. Drug should not be withdrawn abruptly. Contraindicated in herpes simplex and chicken pox.

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Upright Position Advised For Bottle-Feeding Baby

Babies should be bottle-fed in an upright position during the first three months of life to prevent an infection of the ear.

"A supine position of an infant while bottle feeding is a predisposing factor in inflammations of the middle ear cleft," according to an article in the October *Archives of Otolaryngology,* published by the American Medical Association.

Dr. R. Bruce Duncan of Wellington, N. Z., author of the article, said milk had been found in the cleft, or cavity, of the middle ear in such cases.

This results from a sudden gush of milk from the bottle which the baby cannot always prevent from entering the postnasal space and nose, he explained. This problem persists because no bottle-nipple combination has yet been devised that can adapt perfectly to the infant's needs, he said.

On the other hand, he added, a mother's breast is adaptable and it is uncommon to hear of, or observe, this ear infection in a totally breast-fed baby.

Dr. Duncan said he believed ear infections caused by milk are "a frequent type" of middle ear infections in bottle-fed infants.

"Reflux of milk into the postnasal space can occur in any position in which the child is held, but this is probably a very minor cause of middle ear inflammation when the upright position is used," he said.

Upright bottle-feeding was recommended for:

—Babies up to the age of three months.

—All infants in hospitals.

—All premature infants.

—When a baby's nose is blocked by allergy, bacterial, or virus infection.

—When an older child has had an inflammation of the middle ear.

Dr. Duncan based his recommendations on a survey of 242 babies.

Physicians Urge Passenger 'Packaging'

Physicians believe safer "packaging" of automobile passengers could reduce traffic deaths and injuries, according to a survey by AMA.

Members of the American Association for Automotive Medicine (AAAM), most of whom have competed in sports car races and promoted safer auto racing, were polled at a recent safety seminar in Dearborn, Mich.

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The physician experts in automotive medicine rated the seat belt the most important single, economically feasible device now available to protect passengers.

"Packaging a passenger in an automobile follows the same principles of packaging used to protect any valuable object being transported," according to Dr. H. A. Fenner, Hobbs, N. M., newly-elected AAAM president.

"The automobile, like any container being used to transport valuable contents, must be designed so as not to crush in on the contents, burst open, or spill out the contents."

In addition to seat belts, which many believed should be compulsory, the physicians recommended these "packaging" improvements:

—Padded instrument panels, roof supports, and steering column posts.

—Modified dash board so knees would not hit it directly in an accident.

—Safety door locks.

—High seat backs to prevent "head snapping."

—Deep dish steering wheels.

—Elimination of junk-accumulating ledge behind the back seat.

—Elimination of all dangerous pointed objects, projections, sharp corners, and other hazards in the car's interior.

In addition to these packaging improvements, better brakes and outside mirrors were recommended.

One M.D. suggested that safety features should be "built in," not sold as "extras."

The physicians also said they believed many highway accidents could be prevented by compulsory driving training courses in all high schools; improved licensing procedures, including periodic physical examinations of drivers by physicians; uniform highway marking systems, and more stringent enforcement of traffic regulations.

There was one suggestion that every effort be made to devise a test to predict driver behavior. This physician said, "Many persons driving on the highways today are neither physically nor mentally fit to drive."

The survey was made by *The AMA News,* a newspaper published for physicians.

The AMA, the National Safety Council, and the U. S. Public Health Service currently are engaged in a study of ways to educate the public to the advantages of seat belts. A year-long pilot program was begun last February in Fort Wayne, Ind., with the cooperation of local groups, to determine techniques a community can use to encourage the use of seat belts.

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Articles for Publication

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A thesis summary of 75 to 100 words must accompany each manuscript separately from the text. Figures and drawings are acceptable when prepared with black ink on white paper. Photographs for illustrations should be unmounted, untrimmed, glossy prints and all such material must be identified. Illustrations from other publications are not accepted. No charges are made to authors for illustration engravings not exceeding four column inches per printed page.

Reprints may be obtained at cost from the association. The rights is reserved to decline any manuscript for publication. Ordinarily, manuscripts submitted will be acknowledged whether published or not.

Clinical Nutrition Symposium Planned

A symposium of Clinical Nutrition will be held in Washington, D. C. on Nov. 30.

Sponsored by AMA's Council on Foods and Nutrition in cooperation with the Medical Society of the District of Columbia, the meeting will be opened to all interested persons.

Tasty Termination

Now it seems that overindulgers may not only eat themselves out of house and home but right out of this world too. Researchers at Columbia University College of Physicians and Surgeons found food fatal in experiments using male rats. According to the report delivered to the International Association of Gerontology, rats in the first group were allowed to eat all they wanted; 48 per cent lived 800 days. The second group was allowed to eat only one half as much as the first. Eighty-one per cent of those rats lived 800 days. The third group's diet was cut to one-third as much as the first. Eighty-seven per cent lived 800 days. *Interesting note:* When the same sort of experiment was tried on female rats, 80 per cent of the restricted dieters lived 1,100 days.

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Master Health Benefits

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Present group or non-group members and new subscribers of the "J" series deductible contracts, under age 65, may be eligible to add the Master Health Endorsement which will provide:

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The main idea behind this new Master Health Endorsement is to provide an opportunity for Mississippi people to be covered with one plan, one company—with more coverage for less money.

With the growing interest of federal intervention in health affairs and the public concern for higher costs, it is necessary that Blue Cross-Blue Shield do its part to keep pace with the needs of modern health protection and help keep it on a voluntary basis.

The responsibility of determining the future of medical and hospital care in the United States rests with doctors—hospitals—Blue Cross-Blue Shield. ★★★

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NEWSLETTER

MISSISSIPPI STATE MEDICAL ASSOCIATION

JACKSON, MISSISSIPPI

December 1960

Dear Doctor:

It's open season on game and people - an ironic, tragic fact with death from accidental gunshot wounds on the increase in Mississippi. State health officer A. L. Gray called the 94 accidental firearms deaths last year "...the most regrettable of all...accidents." Chief causes of gun mishaps are carelessness and ignorance, Dr. Gray adds.

> Vital statistics show these tragedies about evenly divided between home and field, involving mostly young people. Not included in grim figures are disabling injuries. Physicians are encouraged to support local gun safety programs.

Two popular medical newspapers, Ciba's Medical News and Upjohn's Scope, will soon suspend publication, according to the Wall Street Journal. Demise was attributed to declining profits of sponsors and tighter controls imposed on advertising and promotion expenditures.

There's nothing funny about alcoholism but the word from France, a not-exactly-dry nation, has a twist of humor. Latest studies released by French League Against Alcoholism classified social and economic groups of imbibers. Heaviest drinkers: The French income tax collectors.

An Arizona judge ruled that the courts cannot force a medical society to accept a physician into membership. Adding another precedent to mounting list, the decree held the society to be a private corporation where membership may not be acquired as a matter of right and may be denied arbitrarily. Citation is Blende v. Maricopa County Medical Society, Superior Court, Phoenix, Arizona (August 29, 1960).

A new pilot study of perinatal mortality will be launched in 100 American hospitals where 100,000 births will occur in 1961. Grant of $25,000 was made by American Medical Research Foundation, quasi-official arm of AMA. Dr. Sydney H. Kane, Philadelphia, will head project under advisory monitoring of AMA Committee on Maternal and Child Care. Study mechanics involve periodic reporting from hospital staff committees in participating institutions. As with maternal mortality investigations, anonymity is assured.

Sincerely,

Rowland B. Kennedy
Executive Secretary

AMEF funds serve

Powdered Diet May Be Blasted By AMA

Chicago - The "drink-your-weight-away" world of powdered diet formulas may soon blow sky high with AMA pulling the nutritional rug from under the current fad of do-it-yourself reducing plans, ethical and otherwise. Inside word is that AMA Council on Food and Nutrition may soon pronounce powdered formulas "medically unsound." Recent straw in the wind: Statement by Council Secretary Dr. Phillip L. White that "...no crash diet has a respectable place in good family nutrition."

Cancer Society Research Funds Exhausted

New York - The American Cancer Society is unable to provide needed money for research grants - an uncomfortable first in its 16 year history. ACS scientific advisers called for $9 million but declining "crusade" receipts will trim program drastically during 1960-61 year. Future is even bleaker, says research vice president Harry M. Weaver, who predicted further cuts if 1961 campaign income declines.

Americans Incur Unnecessary 'Medical Care' Costs

Chicago - Self-dosers are spending three quarters of a billion dollars each year on needless health expenditures, says AMA's new commission studying medical care costs. Mail order and over-the-counter vitamins tote up $350 million and laxatives are $148 million. Add to these the expenditures for aspirin, tonics, and food fads for which outlay isn't precisely known. Phony arthritis remedies mulct the gullible of $240 million annually. Serious economists actually include these amounts in "costs of medical care."

Louisiana Physician Publishes Cultism Study

New Orleans - Dr. C. E. Boyd, Shreveport physician, has published a concise, factual booklet, "The Cult of Chiropractic," under joint sponsorship of AMA and the Louisiana State Medical Society. The 72 page document analyzes chiropractic historically, legally, and psychologically. Although not offered for sale, some single copies can be obtained from LSMA or AMA.

Personality Influence of Plastic Surgery Is New Maltz Book

New York - Dr. Maxwell Maltz' new "Psycho-Cybernetics" (Prentice-Hall, $4.95) is set for December 8 publication and may create a minor tempest among some doctors. Maltz dwells on personality influences of plastic surgery, contending that it changes only exteriors. He says an "inner face lifting" is necessary to remove "emotional scars" and advocates what he calls self-image psychology. CBS-TV will soon produce an hour long series, "Dr. Pygmalion," who deals with inner scar patients, based on Matlz' writings.

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Facial Injuries

H. C. ETHRIDGE, M.D., and J. H. HENDRIX, JR., M.D.

Jackson, Mississippi

Established surgical principles for soft tissue and bony injuries of the face are presented. General management of more complex injuries is outlined. The author considers pathology, diagnosis, and treatment.

MOST OF THE SEVERE facial injuries seen by us are the result of automobile accidents. Contact with the windshield accounts for most facial lacerations and contact with the dashboard accounts for most facial and mandibular fractures. Various combinations of these injuries tend to complicate the picture.

Gunshot wounds of the face are by no means uncommon. Most of these are the result of hunting accidents or carelessly aiming an "unloaded" gun.

Lacerations and fractures may be caused by a great number of other incidents such a child falling from his tricycle, explosions, or a stumble from a stepladder.

PATHOLOGY

Soft tissue injuries are the most frequently encountered. They vary in degree from the simple, clean laceration of the skin to actual avulsion and loss of large amounts of tissue. Soft tissue injury resulting from a blow with a blunt object usually causes jagged and irregular defects with contusion of much of the adjacent soft tissue. This severely contused tissue may appear relatively normal at first, but after the healing process has taken place, there is production of fibrous tissue and scarring in these areas. This intensifies scarring and future contractions.

Loss of skin may occur alone or in combination with loss of underlying muscle, nerve, mucous membrane, or even bone. Impregnation of soft tissues with powder, rocks, metal, and wood is seen in explosion wounds. Failure to remove these foreign bodies may result in formation of multiple granulomata or may give the effect of tattooing when powder or dark objects are present.

Eyelid injuries are frequently seen without any injury to the eye itself. Total avulsion of one or more lids is the extreme. Most cases have lacerations of varying degree with no actual loss of tissue. The canthal ligaments are sometimes torn or displaced in association with fractures. The lacrimal apparatus may be lacerated and on occasion almost totally destroyed. The ears are quite commonly lacerated and sometimes completely avulsed.

Laceration of the facial nerve proximal to its division into terminal branches or laceration of one or more of the branches is frequently seen. The infraorbital nerve is usually injured in association with fractures of the maxilla, and the inferior alveolar or mental nerve is sometimes damaged when mandibular fractures are present. Lacerations of the parotid gland or its duct are sometimes seen.

Facial fractures are most frequently multiple. They may be closed or compound, simple or comminuted. Displacement, causing either interference with function or gross cosmetic deformity, requires surgical intervention. Mandibular frac-

tures are classified as above. Fractures of the condyle of the mandible with displacement of the condylar head interfere markedly with the only movable joint in the face and must be treated.

The nose is subject to fractures and displacement of the various cartilages in addition to lacerations. Fracture into the maxillary sinuses occurs in conjunction with practically all facial fractures and as a rule does not cause too much difficulty. Fracture through the anterior wall of the frontal sinus is not serious but fracture through the posterior wall of the frontal sinus is an extremely grave condition. This can provide an open avenue for bacteria to gain entrance into the cranial vault and may result in meningitis, encephalitis, or brain abscess. These complications can be fatal.

DIAGNOSIS

The old standby of inspection and palpation is the most reliable means of diagnosis of injury to the face. This cannot be overstressed. Simply looking at the patient immediately gives the physician a clue to the location of lacerations and often he can estimate depth of wounds and the damage to important structures beneath the skin. Observing the position of the teeth with the mouth open and closed is of paramount importance in diagnosis of fractures. Gross malocculusion is diagnostic of fracture of either the maxilla or mandible.

Careful and systematic palpation of the entire circumference of the orbital rims frequently is diagnostic of fractures. Observation and palpation of the zygoma and zygomatic arch is important. The same is true of the nasal bones and nasal cartilages. Fractures of the maxilla extending into the floor of the orbit will many times cause double vision and can be easily checked.

X-rays are a helpful adjunct to the clinical examination but should be used as confirmation and never relied on in lieu of a careful examination. Certain injuries, such as severance of a parotid duct or of a facial nerve, cannot always be determined until careful and thorough surgical exploration of the wound is carried out.

Case II. Left—Compound fractures and lacerations of nose. Right—Debridement and repair of wounds after open reduction.

TREATMENT

Emergency treatment should first be directed to establishment and maintenance of an adequate airway. Bilateral fractures of the mandible result in loss of support for the tongue and floor of the

Case 1. Left—avulsion of skin of nose and forehead. Middle—primary repair with skin grafts. Right—nose and forehead after serial excision of grafts.

mouth and can allow these structures to fall posteriorly and obstruct the airway. Simply having the patient to sit up and lean forward or to lie on the abdomen will allow gravity to assist in keeping the airway patent. In the unconscious patient the tongue may be grasped with a towel clip or suture and pulled forward until tracheostomy can be performed.

Shock is seen where blood loss has been great and should be treated promptly with blood, vasopressors, fluids, and ligation of major bleeders. Venous bleeding and generalized oozing can readily be controlled by pressure dressings. Associated injuries should be noted and treated appropriately.

Tetanus antitoxin or toxoid is routinely given. Antibiotics are not given indiscriminately in all cases but only where gross contamination is present, when delay in treatment is necessary, or where possibility of intracranial contamination is present from frontal sinus fractures or other skull fractures.

LACERATION REPAIR

Repair of clean, sharp, lacerations is carried out using a subcuticular layer of sutures and final skin sutures. Very fine suture material should be used. We ordinarily use 4-0, 5-0 or 6-0 sutures. Jagged lacerations should be completely excised back to normal tissue, if possible, and closed in

Case III. Left—Avulsion of portion of ala of nose. Right—Nose after composite graft of skin and cartilage from ear.

like manner. Nonviable skin is excised and discarded. Primary Z-plasties are frequently done during closure if the laceration crosses major creases or when contracture of a linear scar will interfere with future function. Eyelid injuries are closed in layers using 6-0 suture material. The tarsal plate is "halved" before being sutured to help prevent notching as healing occurs. The lacrimal drainage system can be cannulated and repaired over this splint.

When an ear has been totally avulsed or has been deprived of an adequate blood supply, it should never be resutured to the scalp and by all means, should never be discarded. The skin should be removed from the amputated ear, and the cartilage cleaned of all fibrous and areolar tissue. The intact cartilage may then be buried subcutaneously in the postauricular region if gross contamination is not present. If desired, it may be

Case IV. Left—Fracture of nose. Right—Fracture of nose after closed reduction.

buried in the abdominal wall, neck, or any other available region. This cartilage can later be utilized to reconstruct an external ear. If the ear has been left at the scene of an accident, one may go back and find it, clean it off, wash it in some mild antiseptic solution, and bury the cartilage.

CLOSING OF WOUND

If at all possible, all facial wounds should be closed by primary suture. Wide undermining of skin edges will allow surprisingly large defects to come together. If this is impossible due to loss of large amounts of tissue, then some type of coverage is necessary by utilizing flaps or grafts. Facial wounds should never be left open to granulate. Rotational flaps from adjacent areas will suffice in some instances. A full thickness graft can always be used for either permanent or temporary coverage. A razor blade is readily available with which to take grafts if a dermatone is not available. Rarely is a flap from a distance used to cover a facial defect.

Primary repair of the facial nerve, using very fine suture material in the nerve sheath, is ideal if the main trunk has been severed. Return of function can be expected in a reasonable number of cases under ideal circumstances. Approximation

of the capsule of the parotid gland is in order when the gland has been severed. The parotid duct should be cannulated with polyethylene tubing and the duct repaired over this splint. The tube should protrude into the mouth and be anchored there until healing is complete. This assures patency of the duct and helps prevent stricture at the site of injury.

REDUCTION OF FRACTURES

Most nasal fractures can be reduced by a combination of intranasal manipulation with an instrument and external palpation with the fingers. Occasionally open reduction and internal fixation are necessary.

Some facial fractures need no treatment when displacement has not occurred. When these fractures cause interference with function, or when deformity of the normal contour of the face is present, surgical intervention is indicated. In both maxillary and mandibular fractures, one of the primary objects of reduction is to establish and maintain occlusion of the teeth. In transverse maxillary fractures, the hard palate and all the maxillary teeth are movable as one independent unit, and must be aligned with the mandibular teeth and held in this position until bony union has occurred. At times the application of interdental wiring is all that is necessary. Where the patient is endentulous, when comminution of the bones is present, and in grossly displaced fractures, open reduction and internal fixation are necessary. Stainless steel wire or Kirschner wires are usually used. Accurate reduction can be obtained under direct vision.

In contrast to fractures of the extremities, open reduction of facial fractures is rarely contraindicated. Because of the vascularity of the facial bones, osteomyelitis is an infrequent complication.

Fractures of the neck of the condyle of the mandible frequently result in complete medial displacement of the head of the condyle, thus disrupting completely the temporo-mandibular joint. Because of such poor results in the past, we have been prompted to remove the head of the mandible and reinsert it in the glenoid fossa and fix it with wires to the ramus of the mandible. Results have been good to excellent.

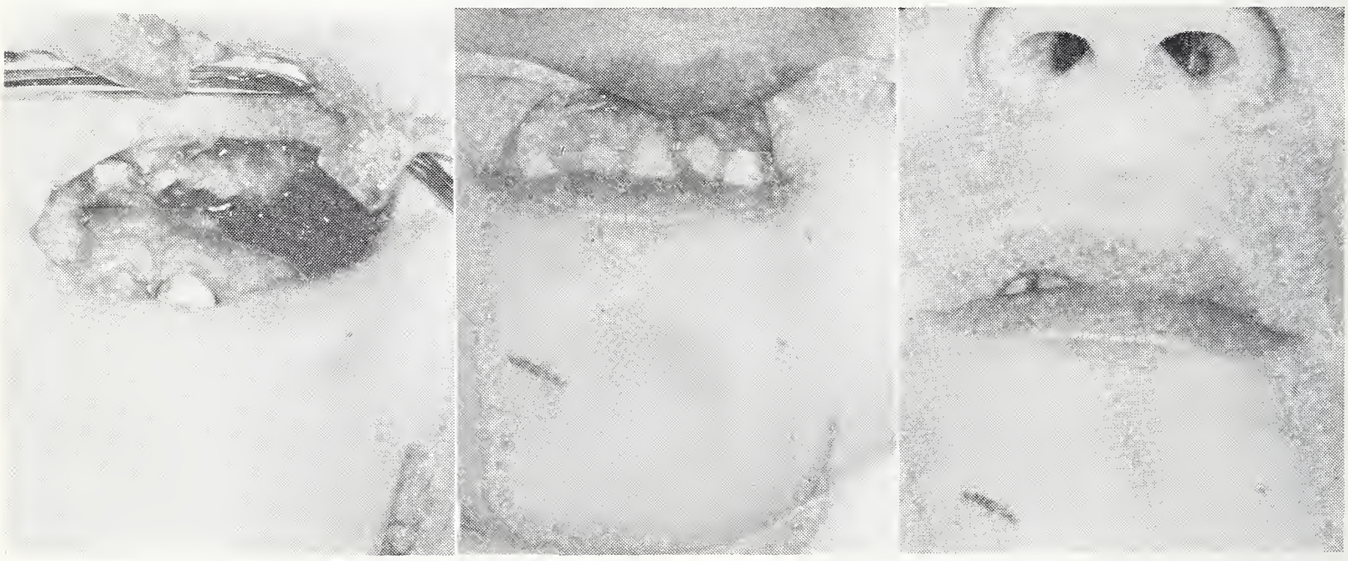
Fractures of the floor of the orbit often require insertion of a bone graft, cartilage graft, or foreign material to prevent herniation of orbital contents into the antrum below.

SUPPORTIVE RECOMMENDATIONS

Pressure dressings tend to minimize edema and aid in splinting soft tissue wounds. Feeding tubes are used rather frequently.

The discriminate use of antibiotics in selected cases, routine tetanus prophylaxis, intramuscular chymotrypsin, narcotics for relief of pain, and high protein diets or liquid protein supplements are all beneficial to the welfare of the patient.

No time limit is set for repair of facial lacerations. Because of the extreme vascularity of the face and its resistance to infection, lacerations may be repaired much later than might be suspected. Facial and mandibular fractures should be



Case V. Left—Partial avulsion of lip and fracture of alveolus. Middle—Post-op view showing good alignment of alveolus and teeth. Right—Post-op view showing lip repair.

done within 10 days. Bony union begins to occur at about this time and reduction is much more difficult.

SECONDARY REPAIRS

An endless number of secondary repairs is available both from a functional and a cosmetic point of view. When wide, hypertrophic, or unsightly scars are present, these may be revised at a later date. At least three months should elapse before scar revisions are undertaken. This allows all scarring to subside and the tissues become soft and pliable. Dermabrasion is helpful in cases of minor irregularities in scars. If contracture bands have formed where scars cross flexion creases, Z-plasties often relieve this condition. Grafts that have been applied at the time of original repair can often be excised completely in a serial manner. Loss of eyebrows or eyelashes may be replaced by hair bearing grafts. Ectropion or entropion of eyelids is correctable as a secondary procedure.

Reconstruction of nasolacrimal apparatus may be done. Forehead flaps serve nicely to reconstruct total or partial loss of the nose. Bone or cartilage grafts are used to replace loss of bone and to restore contour to the face. Arthroplasty of the temporomandibular joint is indicated when trauma has resulted in ankylosis of this joint. Secondary rhinoplasties will correct nasal deformities. Bone grafts to the nose are done when bony and/or cartilagenous support have been lost. Reconstruction of the ear, using the buried ear cartilage if present, or autogenous rib cartilage if the ear cartilage was lost, may be carried out. If the floor of the orbit was not repaired primarily and double vision is present, cartilage or bone grafts later will usually correct this. In cases where facial paralysis is an end result, the general appearance can be greatly improved by means of fascia grafts and/or muscle shortening procedures. Eyelid ptosis, either on a basis of central injury or local injury, can be corrected.

SUMMARY

A review of the causes of facial injuries, the diagnosis of these injuries, and the usual pathologic findings is presented. General principles of emergency care and definitive repair are given without emphasizing certain techniques. Secondary and reconstructive procedures that are available to the patient have also been given.

CONCLUSIONS

Treatment of facial injuries has not changed greatly in recent years. Basic surgical principles are as applicable here as to any other region of the body. Meticulous handling of tissue, conservation of tissue, and the use of fine suture material are not only desirable but absolutely necessary for good results in facial injuries. ★★★

1151 North State Street

A LAMP UNTO OUR FEET

In the San Fernando Valley near Los Angeles, the magnificent lawns are well sprinkled with "Keep Off the Grass" and "No Dumping" signs. Small wonder that passers-by were surprised to see this new one: "Site of the New Bel Air Presbyterian Hospital. Trespassers Will Be Forgiven."

Clinical Problems in Obesity

I. FRANK TULLIS, M.D.
Memphis, Tennessee

A large proportion of adult Americans are overweight according to the Build and Blood Pressure Study, 1959, of the Society of Actuaries. Over age 20, about one man in five and one woman in four is at least 10 per cent above average weight. This frequency, plus the undeniable formula that excess weight equals excess mortality, places obesity high on the list of American health problems. The author reports a study of dietary powder in the management of obesity. Results are statistically presented and discussed.

OBESITY MAY WELL be called the number one nutritional problem in the United States. One man in five and one woman in four past the age of 20 are 10 per cent or more above average weight. The prevalence is even more impressive on comparing actual weights with desirable weights, i.e. those weights associated with lowest mortality. Of men 30 to 39 years old, 25 per cent are above desirable weight by 20 per cent or more. This increases to 32 per cent for the 40 to 49 age group and 34 per cent for 50 to 59. For women the figures are slightly higher. This makes obesity a major health problem among adult Americans, particularly those past middle life.[1]

PENALTY: EXCESS MORTALITY

The penalty for excess weight is clearly excess mortality. Among men 15 to 69 years of age when weight is 20 per cent above average, mortality from all causes is 25 per cent greater. In this same group, mortality from heart and circulatory diseases is 43 per cent greater; vascular lesions of the central nervous system, 53 per cent greater, and diabetes, 133 per cent greater.[2]

In spite of the magnitude of the problem, commonly used methods of weight reduction and of weight maintenance after reduction have been generally unsuccessful.[3] Such methods often involve both patients and physicians with diet charts, calculations, and measurements. It is frequently difficult for the physician to portray continuing enthusiasm and encouragement. Self-discipline to "hold back" is a constant problem for the patient. Real accuracy of caloric intake is difficult to achieve.

How fat is any given patient? Although it seems simple, this is not easy to answer. Body weight depends upon the amount of all the constituents of the human body. For practical purposes this includes lean body mass (chiefly muscle and bone), body water, and body fat. Actually specific determinations can be made on those component parts by such techniques as measuring body water and determining body specific gravity by weighing the individual under water. While it might be pleasant to add swimming pools to our offices, this is not exactly practical. Measurement of body skinfold thickness has been shown to represent accurately the actual amount of body fat, measuring with a special caliper, for example, the skinfold thickness over the triceps and infrascapular area.[4, 5] In practice, however, usually both the patient and the physician by simple inspection can determine when obesity is present. This inspection is simply submitted to a degree of measurement when height-weight tables are used.

NEW STANDARDS

We are fortunate today to have some new standards for comparison. The relationship between mortality and obesity was studied by the Society of Actuaries by reviewing the experience

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From the Department of Medicine, University of Tennessee School of Medicine.

Read before the 12th Annual Scientific Assembly, Mississippi Academy of General Practice, Jackson, September 28-29, 1960.

Dietary powder used in this study was Metrecal, a trademark of Mead Johnson and Company, Evansville, Indiana.

of life insurance policyholders of a number of insurance companies. These results were published as the *Build and Blood Pressure Study,* 1959.[6] From these data the Metropolitan Life Insurance Company has summarized the information concerning obesity and has set forth a new table of desirable weights, i.e. those weights associated with lowest mortality.[7] Their publication *Overweight, Its Prevention and Significance,* 1960[8] is indeed a useful desk-copy summary of these tables.

IDEAL VS. DESIRABLE WEIGHT

Even with the new tables we still have some problems. All too often the patient has seen the new table of *Average Weights for Men and Women* and interprets this as an ideal weight. This is far from true since these weights, simply the average of many Americans, are much higher than the desirable weights. Then too, the data of all the tables are expressed in indoor clothing and in shoes. Although understandable for insurance examinations, it seems more desirable for the clinician to record height without shoes, thus requiring a correction factor to use the tables. Finally the clinician has to decide the general body frame of the individual, and for this he has no one precision measurement. For clinical purposes general inspection and estimation are as accurate as anything else.

The important thing is that out of these steps the clinician arrives at a desirable weight for each patient and this figure should be impressed on the individual as a specific goal and objective. Then it demands all the patience, self-control, and ingenuity of the physician to provide over a period of weeks and months the total support necessary to make the patient's own motivation sufficiently strong to succeed in a difficult task.

A COMMON DENOMINATOR

Different physicians have varying degrees of success in their practices with different diets, but all programs have the common denominator of having the patient ingest fewer calories each day than are required by any given individual under given conditions. It is painful how few calories some people require for normal daily life, even when determined under controlled conditions. It would seem that these particularly are the individuals for whom specific additional exercises such as walking, swimming, bowling, and bicycling should be prescribed.

Perhaps the foremost problem is to get the patient to accurately ingest the desired number of calories. Even in a metabolic research unit it is difficult to get extremely accurate determinations on the composition of food eaten. In daily life, long-standing cooking habits, eating at the lunchroom, going out for the evening, and the many niceties of life that center around food, all make the task most difficult for some people.

PATIENT DATA

The Department of Medicine has been interested in both the physiological and psychological factors related to a complete formula diet for weight reduction. We selected 105 white overweight patients, 25 men and 80 women, ranging in age from 15 to 77 years with a median of 41 years. They were from many walks of life and most of them were 30 to 59 per cent greater than their desirable weights, with the majority up to 39 per cent overweight. Most of them were in good general health other than obesity.

FORMULA DIET

This entire group was given a formula diet in which total daily nutrition was provided by one-half pound of dietary powder which supplied 900 calories with 70 gm. protein, 20 gm. fat, 110 gm. carbohydrate, and sufficient vitamins and minerals for adequate nutrition for normal adults. Water, coffee, and tea with noncaloric sweeteners only were allowed as desired. No other foods were allowed. All patients were treated entirely on an outpatient basis. Each patient reported to the laboratory weekly at which time weight was recorded, problems discussed, and suggestions given. Patient cooperation and motivation were supported strongly by repeated guidance from trained personnel.

The majority of patients noted limited initial malaise and irritability, but thereafter they were able to follow the regime with surprising ease. The taste and general character of the formula were quite acceptable, and the patients usually experienced adequate satiety. The outstanding advantages of the program were simplicity, convenience, and accuracy. Many subjects volunteered that they considered it easier to abstain completely from natural food and to drink formula only, than to "hold back" in the amount of food eaten. Side effects were few, the most common being constipation usually corrected by bulk-producing materials.

RESULTS

The results were impressive. Of the 105 patients, 82 per cent ingested continuous formula diet for four weeks, 66 per cent continued six weeks, 52 per cent continued eight weeks and 41

per cent continued 12 weeks. The greatest weight loss occurred in the first two weeks. Among the 101 patients who continued the full formula one week and longer, the average weight loss was 6.2 pounds in the first week, 4.5 pounds in the second week, 3.7 pounds in the third week, 3.4 pounds in the fourth week, and from 1.6 to 3.1 pounds per week thereafter.

SUMMARY

1. Obesity is a disorder that merits consideration equal to that given in hypertension, heart disease, diabetes, and other chronic diseases.

2. While the individual patient must be motivated properly, it is up to each of us as practicing physicians to provide effective medical supervision of weight-reducing regimens.

3. A significant percentage of overweight patients followed a formula-diet regimen for substantial periods of time with impressive average weight loss, surprising ease, and few side effects.

4. Simplicity, convenience, and accuracy of the formula-diet were outstanding, replacing time-consuming calculations, measurements, and diet charts.

5. With weight reduction only the first step in obesity, continued supervision by the physician and his trained staff is essential for long-term weight control. ★★★

858 Madison Avenue

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READING AND WRITING AND ACCIDENT RATES

Although America's public schools are among the safest places for children, school accidents can and do happen. The Health Insurance Institute says that the most dangerous areas of the school are the playground and gymnasium where 64 per cent of the mishaps occur. Most likely time for a hurt at school is in the first part of the day with 68 per cent of all accidents taking place before noon. Boys are more accident-prone at school with a 65 per cent share to the girl's 35 per cent. Four out of 10 school accidents result in wounds. But a brighter note: No absences from classes are incurred in 71 per cent of the mishaps.

Fungi as Related to Ophthalmology

EUGENE MORRISON, M.D.
Oxford, Mississippi

The author first presents a brief general consideration of fungi and then turns to fungous diseases in ophthalmology. He discusses cornea, orbit, and lacrimal apparatus involvement, conjunctivitis, and intraocular inflammations. The last portion of the paper is devoted to treatment.

THE SUBJECT is discussed in two parts: First, a brief general consideration of fungi. Secondly, fungous diseases in ophthalmology.

GENERAL CONSIDERATIONS

The yeasts, molds, and actinomycetes are included by the term fungi. Of these groups the actinomycetes only are closely related to true bacteria and show considerable likeness to them. The yeasts and yeast-like organisms exist as unicellular round or ovoid structures of widely varying sizes. The molds grow as long filamentous structures known as hyphae, which may or may not be divided by septa. A mass of hyphae is called the mycelium. Some fungi, as *Blastomyces dermatitidis* and *Histoplasma capsulatum,* exist in the yeast phase in the animal body and on blood agar at 37°C but change to the mycelial phase when grown on most media without blood at room temperature, that is, they produce hyphae and grow as molds.

Reproduction

Fungi in the yeast phase reproduce by budding. When in the mycelial phase, fungi reproduce by the production of sexual and asexual spores; the latter are of two kinds: conidia and chlamydospores. When placed in a suitable medium, all kinds of spores germinate to produce colonies. Also colonies may be produced by the transplantation of hyphae.

Classification

Fungi are classified according to the kind of sexual spore formed. Sexual spores are formed more rarely than are asexual spores, and in some species sexual spores have never been demonstrated. Those fungi which have not been observed to form sexual spores are grouped together and called fungi imperfecti, which group contains most of the fungi which produce systemic mycotic infections.

Cultivation

The most useful medium for cultivating fungi is Sabouraud's glucose agar. It is suitable for the primary isolation of many fungi and will support growth of most species after isolation. For isolation, other media may be preferable to Sabouraud's; for instance *H. capsulatum* is more likely to grow in blood agar when the inoculum is clinical exudates. Special media may be necessary to cause fungi to produce typical identifying spores or other structures; i.e. cornmeal agar causes candida albicans to produce typical chlamydospores. Most fungi grow in air; however, the organism of actinomycosis is anaerobic and requires exclusion of oxygen. Fungi grow at markedly different rates. Some produce colonies in a few days, such as *Aspergillus* and *Penicillium* species, but it might require several weeks to isolate *H. capsulatum* from exudates.

Clinical Diagnosis

Cultural isolation of the fungus from a lesion is generally the most accurate and satisfactory diagnostic procedure. If the inoculum is gotten from a closed lesion such as an abscess, then demonstration of a fungus definitely establishes the diagnosis. When a fungus is cultured from an open lesion such as a corneal ulcer, it must be remembered that it might simply be a contaminant of the lesion and without causative significance. If the fungus is repeatedly present or is present in

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large numbers, then it is significant as either a primary or secondary invader. Then, too, when a highly pathogenic species, such as *B. dermatitidis* or *H. capsulatum* is isolated once from an open lesion it is much more significant than when an aspergillus is found, since the latter is a common contaminant as well as being sometimes a pathogen. A few species of fungi have never been cultivated.

Identity by Characteristic Structure

Scrapings or pus from a lesion may be placed in saline or 10 per cent potassium hydroxide on a slide and studied under the microscope. The potassium hydroxide is used to dissolve keratin, as in skin scrapings. Although fungi do not stain as easily as bacteria, smears can usually be stained well enough with the bacterial stains or Wright's stain to be helpful in identifying fungous elements and establishing a diagnosis of mycotic infection. An exact diagnosis cannot be made unless a characteristic structure, such as a sulfur granule in actinomycosis, is found. Smears sometimes fail to show fungi when cultures demonstrate them.

Surgical biopsy of the lesion is often helpful. It may lead to a general diagnosis of mycotic infection or an exact diagnosis where characteristic structures are present, as in histoplasmosis, blastomycosis, actinomycosis, and coccidioidomycosis.

Use of Immunological Tests

Immunological tests, particularly serological tests and the skin tests, are often helpful in fungous infections. It should be remembered, however, that the host generally responds to mycotic infection by producing little immunity and much allergy. In this respect fungi are very similar to tubercle bacilli. In the serologic tests the antibody titer is usually low. The fungous antigens in skin testing produce the delayed or tuberculin type of reaction which is best read in 48 hours by the area of edema produced rather than the area of redness caused.

Immediate or anaphylactic reactions do occur rarely, however, as has been learned from the anaphylactic deaths resulting from therapy with penicillin. Some antigens are present in several different species of fungi. This sharing of one or more common antigens causes some lack of specificity in immunological reactions. For instance, both histoplasmin and blastomycin will react in the skin of a patient with blastomycosis, but Martin[1] has pointed out that if a killed suspension of yeast-phase *B. dermatitidis* is used, it will react only in the skin of the patient with blastomycosis. Thus a more skilled choice of antigens helps in getting around cross reactions.

FUNGOUS DISEASES IN OPHTHALMOLOGY

Fungous lesions of the eye may be primary or metastatic from mycotic lesions in other parts of the body. Fungi typically cause chronic granulomatous lesions which have much resemblance to tuberculosis. Occasionally the more virulent fungi produce acute disease such as is seen in the disseminated type of histoplasmosis and coccidioidomycosis.

Increase in Mycotic Disease

There is a widespread opinion that mycotic diseases, including those of the eye, are increasing in frequency. This increased incidence has been attributed to the common use of antibiotics and corticosteroids.[2, 3, 4] In the normal bacterial flora of man there appears to be a delicate biological balance between bacteria and fungi. When this balance is disturbed by eliminating bacteria with antibiotic therapy, then fungi seem to grow with increased virulence.[5] It has been demonstrated several times in animal experiments that fungi show increased virulence when the animals are given either antibiotics or corticosteroids or both.[6, 7, 8]

Cornea

Of all the ocular structures and adnexa, the cornea is the most frequent site of mycotic lesions. Fungous corneal ulcers have been caused by many different species of fungi, many of which have been classified as entirely nonpathogenic, and some of which are beyond the experience of medical mycologists, i.e. one case of Anderson[5] in which a mixed infection was present had as one infecting agent a corn smut. This is somewhat analogous to the situation observed in fulminating endophthalmitis caused by *Bacillus subtilis,* a bacterial species generally regarded as entirely nonpathogenic.

Trauma, such as corneal abrasion or foreign body in the cornea, occurs as a predisposing factor in a large percentage of cases of fungal keratitis. Cases of fungous keratitis complicating treatment of corneal lesions with corticosteroids and/or antibiotics have been reported fairly frequently.[9, 10, 11, 12] Certainly lacerations or abrasions of the cornea which do not heal promptly under therapy with corticoids and antibiotics and which show a whitish fluffy mass or whitish plaque at the

site of the epithelial break should cause one to consider fungous infection.

ORBIT

In textbooks of medical bateriology of a few years ago about 12 or 13 species of fungi were described as those which produce deep or systemic mycoses. It now appears that this list is too short, for in 1943 Gregory *et al.*[13] reported a new systemic fungous disease, mucormycosis. In summarizing this disease, Baker[14] pointed out that it is caused by fungi usually not considered pathogenic, being common in nature and as laboratory contaminants. Especially important as causative agents are species of *Rhizopus*. He stated that in the cerebral form of the disease the fungus appears to enter by the nose and to produce sinusitis and orbital cellulitis, with thrombosis of the ophthalmic and internal carotid arteries.

Aspergillus species, the actinomycetes, and *Sporotrichum schenkii* are known to produce orbital lesions, and it seems likely that any of the systemic fungi may produce infection in the orbit.

Conjunctiva

The most common cause of uniocular conjunctivitis with preauricular lymphadenitis (Parinaud's syndrome) is the *Leptothrix* of Verhoeff. This disease is commonly contracted from cats which harbor the organism in their mouths as saphrophytes. Diagnosis is not easy because the filamentous unbranched organism is difficult to cultivate and to stain. Biopsy from the conjunctival lesion or the affected lymph node offers the surest diagnosis. Gifford and Day, quoted by Birge,[15] believed the diagnosis could be made by properly stained smears, but there is disagreement on this point.

Lacrimal Apparatus

Infection with actinomycetes of low virulence, aspergilli or *Candida* species may cause partial or complete obstruction. Chronic conjunctivitis usually accompanies such infection. Actinomycotic infection is the most common and usually produces a concretion in a canaliculus, which concretion must be removed for cure of the patient.

Intraocular Inflammations

In case of penetrating injury to the globe by accident or surgical incision it seems that many different fungal species, some of which are not considered pathogenic, are capable of producing intraocular infection. For instance Foster *et al.*[16] experienced three instances of fulminating endophthalmitis following cataract extraction; in each case a species of *Volutella* was isolated. This fungus is not considered pathogenic, and medical mycologists have had little experience with it.

In recent years several ophthalmologists have observed uveitis occurring in cases of systemic mycotis infection particularly in histoplasmosis,[17] coccidioidomycosis,[18] and blastomycosis.[5]

Treatment

The actinomycetes have generally responded to prolonged treatment with sulfonamides, penicillin, or the tetracycline drugs, but the yeasts and molds have resisted treatment with antibacterial antibiotics.

Three relatively new antifungal agents have greatly improved therapy of mycotic disease caused by the yeasts and molds. These agents are: griseofulvin, nystatin, and amphotericin B.

Griseofulvin is effective when given by mouth against the species of *Trichophyton, Microsporum,* and *Epidermophyton* which cause ringworm, and is not known to be effective against any other organisms. So far it has been ineffective on topical application.

Nystatin is given by mouth and in topical application. Montana[19] found that up to 100,000 units per ml. could be dropped on rabbits' corneas without reaction, but subconjunctival injection of 2,000 units caused necrosis. Fungal spectrum of nystatin is not yet fixed. It has been used with success in monilial infections.

Amphotericin B is used by intravenous and parental injection and topical application. Montana[19] reported that it could be injected subconjunctivally in rabbits or instilled into the conjunctival sac in concentration of 5 mg. per ml. without local tissue reaction; he further stated that neither nystatin nor amphotericin penetrated into the aqueous when given by drops on the cornea or by subconjunctival injection. Littman *et al.*[20] states that the maximum dose for man is 1 to 1.5 mg. per kilogram per day. Anderson[5] has used eye drops of 2 mg. per ml. in man.

In treating a case of chromoblastomycosis, DeFoe and Harber[21] found that amphotericin B given intravenously would not give a drug concentration high enough to cure the patient, but that local infiltration of the lesion with the drug was successful. Although the antifungal spectrum of amphotericin B is not presently fully known, it appears to be effective against more species than nystatin.

In addition to its favorable action in some cases of actinomycosis and nocardiosis, the sulfonamides have been beneficial in certain other fungous diseases. In a recent interview, Amos Christie of the

Vanderbilt Medical School was quoted as having successfully used sulfonamides in progressive disseminated histoplasmosis in children.

Whatever drug is used, it should be remembered that mycotic diseases are very persistent and that rapid cures are rare. Prolonged treatment is needed in most cases. ★★★

512 Van Buren Avenue

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SECRET FROM WHOM?

During an election in an Iron Curtain country, factory workers were led to the polls and handed a sealed envelope to be deposited in the ballot box. One of the more inquisitive opened his envelope and started to examine the ballot slip inside.

"Why are you doing that?" asked the supervisor.

"I want to know for whom I am voting," the worker explained.

"Are you out of your mind?" cried the supervisor. "Don't you know that the ballot is secret?"

Improved Postpartum Bowel Function

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Eight hundred successive pregnant patients formed the basis for this study of postpartum bowel function. The object was to determine whether the need for postpartum enema could be further eliminated by use of a physiologic laxating agent, dioctyl sodium sulfosuccinate combined with the methanol-extracted and purified glycosides of cascara. Results are reported and discussed.

THERE HAS BEEN a growing tendency in recent years toward a more physiological approach to all aspects of obstetrics. Various investigators have reported on methods of eliminating postpartum constipation and the need for postpartum enemas. This improved bowel function has been achieved by early ambulation, the free intake of fluid in both the ante- and postpartum periods, various laxatives, suppositories and wetting agents.[1, 2, 3, 6, 7, 9, 13]

The author feels that the substitution of vaginal examinations for the rectal examinations during labor is also a contributing factor in the establishment of good bowel habits. The safety of vaginal examination in labor has been reported by Reis,[12] Prystowsky,[11] Fara *et al.*,[4] and the author,[6] among others. These reports even strongly support the desirability of vaginal examination in labor. Spontaneous bowel movement in the postpartum patient can be further helped by the psychological preparation of the patient. Previous reports on the use of suppositories alone[2] or in combination with mineral oil[6] have shown 70 per cent and 88 per cent spontaneous evacuation.

The object of this study was to determine whether the need for the postpartum enema could be further eliminated by use of a physiologic laxating agent, dioctyl sodium sulfosuccinate combined with the methanol-extracted and purified glycosides of cascara.

METHOD

Eight hundred successive pregnant patients at term were placed on the following regimen. From the time of admission each patient received one capsule of the medication three times daily until the patient experienced a bowel movement. (Our custom is to consider the immediate 24 hours following delivery as the day of delivery. The next 24 hours is called the first postpartum day, and so on.) No other laxative medication was given during this time. If no bowel movement had occurred by the beginning of the third postpartum day, two glycerin suppositories were given rectally. In the absence of a bowel movement within one or two hours following the suppository, enema was then administered.

RESULTS

Ninety-four per cent of the patients had a spontaneous bowel movement by the second postpartum day, including[12] Caesarian section patients. These cases received only the medication in the manner outlined; the remaining 8 per cent of the patients received, in addition, two glycerin suppositories on the third postpartum day. Half of these patients also required an enema to effect a bowel evacuation within the desired time period.

At no time was any untoward effect noticed on the stool of 80 nursing infants whose mothers were receiving the medication. (See Table 1.)

DISCUSSION

These results indicate a definite advantage to incorporating the use of the laxating agent in the management of the term postpartum patient. That we were able to achieve this incidence of success is felt to be due to a number of other factors which warrant further mention. We have been using

From the Marion Pavillion, St. Mary's Hospital, Hoboken, New Jersey.

Capsules of medication used in this study contained 100 mg. dioctyl sodium sulfosuccinate and 30 mg. Peristim, a purified cascara derivative. (Peri-Colace®, a trademark of Mead Johnson & Company, Evansville, Indiana.)

sterile vaginal examinations exclusively during labor for the past eight years. This is supported by the findings that sterile vaginal examinations have equal, or lower, morbidity than rectal examinations.[4, 6, 11, 12] Furthermore, we have long believed that the incidence of transient, external hemorrhoids and fissures during the early postpartum period is directly related to rectal examinations during labor. The presence of these painful complications is not at all conducive to spontaneous bowel movement.[5, 8, 10]

TABLE 1

Day on Which Spontaneous Evacuation Occurred	*Total Dosage*	*Number of Cases*
Day of delivery	2-3 capsules	80
(First 24 hours)	4-6 capsules	212
Second 24 hours	7-9 capsules	399
Third 24 hours	10 capsules	61
Total		752

We encourage the increased use of fluids during the postpartum diaphoretic period. Due to a widespread but erroneous impression among patients, we find it necessary to strongly advise the patients that drinking fluids will not cause breast engorgement; but on the contrary, that fluid restriction has no effect on breast engorgement and will contribute toward constipation.

Of great importance is the preliminary psychological preparation with regard to the postpartum bowel movement. The physician not only informs the patient what is desired, but explains that the first bowel movement is not a painful experience and that the sutures cannot break with bearing down. He also explains why the patient may feel as though her "insides are pushing down" and that a bowel movement will not cause "anything to fall out."

It is interesting to note that in an unpublished time-motion study that the average time consumed by hospital personnel administering an enema is approximately 16 minutes for a single patient. Another similar study found that the nursing time for an enema averaged 23 minutes.[1] This is considerably more than the time consumed in giving a capsule during the regular medication rounds.

We consider it most important to start the medication during labor, since this provides anywhere from a few to 24 hours head start on the utilization of its effects. This would seem to be supported by the 80 (10 per cent) patients who experienced spontaneous evacuation on the day of delivery and the 212 (27 per cent) on the first postpartum day. We prefer the use of ordinary glycerin suppositories before resorting to the use of enema.

CONCLUSION

The physiologic laxating agent is a valuable adjunct in the management of the postpartum patient. In the manner described, 94 per cent of postpartum patients had a spontaneous bowel movement within the third postpartum day. ★★★

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MOVING EMOTION

And then there was the fellow who caused a lot of raised eyebrows by walking down the street with a couch on his back until they found out he was just a psychiatrist on his way to a housecall.

Leptospiral Infections

ROBERT S. SPAIN, M.D.
Greenville, Mississippi

Leptospiral infection, a well-known entity in Europe and Asia, is rarely diagnosed in this country. The author suggests that the incidence may be considerably higher than reported and that this disease should be considered whenever an influenza-like syndrome is accompanied by jaundice or meningeal irritation or particularly by leukocytosis and conjunctivitis. He reports two instances of probable leptospiral infection seen at a Greenville hospital. Epidemiology, clinical manifestations, diagnosis, and treatment are considered.

ALTHOUGH LONG KNOWN in Europe and Asia, infection with leptospira still remains a clinical oddity in this country. As will be pointed out later, the scarcity of diagnosis of leptospiral infection more likely is related to the infrequency with which this diagnosis is considered and appropriate diagnostic procedures are performed than to the true incidence of the disease itself. Two instances of probable leptospiral infection which were seen at a hospital in Greenville, Mississippi, in the late summer and early fall of 1959 are presented in this paper and a brief summary of some of the clinical and other aspects of leptospirosis is discussed.

CASE REPORT 1

A 48-year-old white male farmer was admitted complaining of chills, fever to 103°, generalized aching which was more marked in head, neck, back, and legs, and nausea with vomiting on two or three occasions, all of six days' duration. There had been no improvement with tetracycline therapy during the two days preceding admission.

Examination revealed temperature 103, pulse 110, blood pressure 118/70. There was bilateral conjunctivitis, the throat was injected, a few shotty lymph nodes were palpated in the neck, and a few scattered rales were heard through the lung fields. There was tenderness over the entire upper and lower back and some mild flank tenderness on the right side. The remainder of the physical examination was within normal limits.

White blood count on admission (seventh day of illness) was 9,500, of which 52 per cent were neutrophiles and 48 per cent lymphocytes. Repeated white blood cell and differential counts on the ninth, 13th, and 18th days of illness were also normal. Hemoglobin and hematocrit were normal. Urinalysis on admission and again three days later revealed a few pus cells but otherwise was not abnormal. Stool was 3+ positive for occult blood three days after admission but was negative for parasites or ova. Routine febrile agglutinations were negative an admission and again 13 days after admission. Blood culture revealed no growth. Chest x-rays on admission and on the 15th hospital day were considered negative as was intravenous pyelogram on day of admission.

Initial treatment of chloramphenicol in a dosage of 1 gm. daily produced no improvement after 48 hours. Dosage was increased to 3 gm. daily following which temperature receded to normal limits within two days. Fever again rose to 101° three days later after dosage was reduced to 1.5 gm. daily. There was no response of this febrile recurrence to increasing dosage to previous level for three days, nor to supplemental intravenous penicillin, 5,000,000 units daily for two days. These drugs were discontinued and erythromycin was instituted in dosage of 1 gm. per day. There was gradual return of temperature to normal limits over a period of four days (21st day of illness).

Clinical course paralleled temperature curve, complaints consisting primarily of muscle aches as well as some abdominal distress and abdominal tenderness which was more marked in the left upper quadrant, although the spleen never was definitely palpated. With disappearance of fever, the patient's clinical status improved steadily, and he was discharged improved on the 19th hospital day.

Read before the 74th Semi-Annual Meeting, Delta Medical Society, Belzoni, October 12, 1960.

CASE REPORT 2

A 25-year-old white male, a son of the first patient, was admitted a week after his father. Admission complaints were chills and fever recurring over a period of approximately three weeks, headache, anorexia, nausea, a mild nonproductive cough, and aching in the legs. Blood count, urinalysis and chest x-ray done in another community nine days prior to admission were said to be normal.

Examination revealed temperature 99.8°, pulse 100, blood pressure 116/80. The physical examination was not abnormal with the exception that the liver was barely palpable with deep inspiration.

White blood count on admission was 8,300 of which 67 per cent were neutrophiles and 32 per cent lymphocytes. Hemoglobin and hematocrit were normal, as was urinalysis. Routine febrile agglutinations were negative. Blood culture revealed no growth.

The patient had fever of 100.6° on day of admission. Treatment was started with chloramphenicol, 2 gm. in 24 hours, and temperature gradually returned to normal over a period of 48 hours. He was discharged on the fourth hospital day to continue chloramphenicol, 1 gm. per 24 hours, for an additional three days.

Agglutinations were performed at the state laboratory on blood specimens obtained from both patients on the day of admission of the second patient, which was the 13th day of his father's illness. The son's specimen was reported as positive and the father's as negative for leptospira on agglutination lysis test. Titer of son's specimen was not reported nor was a serotype identified. Subsequent attempts to obtain later specimens for further testing were unsuccessful. Virological studies revealed no evidence of any of the usual viruses.

EPIDEMIOLOGY

Leptospiral organisms are found in many animals. They are endemic in cattle, swine, and dogs, and apparently are transmitted by rats, voles, and other small animals. Infection of the human being results through direct contact with infected animals or through indirect exposure to stagnant water which has been contaminated by the urine of infected animals.[1] For example, leptospirosis occurs fairly frequently in Europe among workers in swampy districts[2] and has been reported in fairly large numbers among persons swimming in infected creeks or ponds.[3] Such an outbreak occurred in Alabama 10 years ago among several persons attending a picnic and swimming in a creek which later was found to contain floating dead hogs from an infected herd.[4]

In Mississippi, leptospirae are common in cattle and hogs and the carrier status is quite frequent in dogs. According to Durward Blakey, director, Division of Preventable Disease Control, Mississippi State Board of Health, leptospirosis jaundice kills more dogs than does infectious hepatitis over the state at large. Apparently only a few sporadic cases have been reported among humans in the state.[5]

In the cases presented here, seven dogs belonging to the patients had been sick during the preceding two or three months. Five of them had died and the other two had survived. There also were a number of pigeons roosting in the barn, many of which had been sick.

CLINICAL MANIFESTATIONS

Several strains of leptospirae have been reported as etiologic agents in humans in this country:

L. icterohemorrhagiae (Weil's disease or spirochetal jaundice) typically produces an acute illness manifested by hepatitis and nephritis which often is accompanied by meningitis.[6]

L. canicola (canicola fever) is endemic in dogs. Characteristically in man it produces an influenza-like syndrome which often is accompanied by severe headache and signs of meningeal irritation. Renal and hepatic disease occur less frequently.[7, 8]

L. pomona (swineherd's disease) also usually is associated with an influenza-like illness in which an aseptic meningitis is not infrequent.[9, 10]

L. grippotyphosa (mud fever) usually appears as a grippe-like syndrome with little meningitic, hepatic, or renal involvement.[11, 12]

L. autumnalis (Fort Bragg fever or pretibial fever) was found in a group of soldiers stationed at Fort Bragg, N. C., during World War II who developed a syndrome characterized by headache, malaise, splenomegaly, and an erythematous rash limited to the pretibial areas.[13]

L. australis A. only recently has been reported in this country. Manifestations in Australia consist primarily of headache, muscle pains, chills, abdominal pain, and vomiting.[14]

Although each of these syndromes usually is thought of in terms of the strain which has been indicated, it now appears that each may result from infection with any of these strains.[1]

The general clinical picture of leptospirosis is that of a biphasic illness. Characteristically, the onset is abrupt, with the predominant symptoms of the first stage being chills and fever, headache, and myalgia, which is more marked in the calf and lumbar muscles. Abdominal pain may occur due to involvement of abdominal wall musculature. Conjunctivitis occurs frequently and often is of diagnostic import. Photophobia and retrobulbar pain are not infrequent. Minor gastrointes-

tinal complaints, such as anorexia, constipation, occasional vomiting and diarrhea, may occur quite often but hematemesis and melena are infrequent. Jaundice may occur at this stage and usually heralds a more severe and protracted illness. Rash may occur and may vary from an erythematous eruption to a hemorrhagic purpura. Arthralgia may occur and cough is not infrequent. The fever usually recurs for a period of four or five days, which represents the first stage of the illness.[15]

FIRST STAGE

Physical findings may include conjunctival injection, lymphadenopathy, and muscle and abdominal tenderness.[16] Clinical icterus may be evident. Hepatic enlargement may occur in icteric or anicteric patients but splenomegaly is uncommon. Signs of meningeal irritation may be present. Hypertension is uncommon, although laboratory evidence of renal involvement occurs frequently. Leucocytosis and elevation of the sedimentation rate are usual laboratory findings. Proteinuria and cylindruria occur commonly and elevation of the blood urea nitrogen is not infrequent. Leptospirae frequently can be cultured from blood, urine, or spinal fluid during the first stage of the disease.

SECOND STAGE

The second stage is defined as beginning with defervescence from the first stage and characteristically is milder and shorter in duration. Fever is common but usually lasts only two or three days and does not go as high as in the first stage. Meningitis is the principal second stage manifestation and may occur without the usual signs or symptoms of meningitis. Duration of meningeal symptoms and signs may vary from one day to two weeks. Patients with primary hepatic involvement in the first stage usually continue to manifest jaundice and other evidence of liver dysfunction throughout the second stage, which lasts longer than usual. These patients usually are quite "sick" as are those with severe renal involvement manifested by marked oliguria or anuria continuing from the first stage. Blood, urine, and spinal fluid are usually sterile during this stage, although spinal fluid findings of aseptic meningitis are quite common.[15]

Although the usual clinical picture of leptospirosis is that of influenza, hepatitis, or meningitis, more bizarre patterns have been observed. Cases of arthritis with myocarditis,[17] and of endocarditis[5] have occurred. Both pneumonitis[18] and miliary type pulmonary lesions,[19] demonstrated by x-ray, have been reported.

DIAGNOSIS

Clinical suspicion of leptospiral infection is justified in any patient with apparent influenza, hepatitis, or meningitis which is accompanied by renal involvement, leucocytosis, or conjunctivitis. Differential diagnoses include influenza, infectious or serum hepatitis, poliomyelitis, the viral encephalitides, and the bacterial meningitides.

Laboratory confirmation of leptospirosis requires demonstration of the organism or of specific agglutinations in the serum. Darkfield examination of blood, urine, or spinal fluid during the first week of illness may reveal the organisms but the technique is difficult. Culture or animal inoculation of blood, urine, or spinal fluid during the first week of illness may demonstrate the organisms.

Serological tests show the presence of type-specific agglutinins starting in the second week of illness,[15] the titer rising during the immediate convalescent period, and a demonstrable titer remaining for months or even years. Agglutination lysis or complement fixation tests are utilized for this purpose. Unfortunately, these tests require live organisms for antigens and they are performed in only a few institutions in this country.

The lack of availability of applicable diagnostic procedures undoubtedly affects the frequency with which this diagnosis is seriously considered. The inconvenience of obtaining, storing, and mailing acute and convalescent specimens of serum and of securing reliable epidemiological information, as is requested by the governmental agencies before the appropriate tests will be performed in governmental installations, unfortunately discourages even the interested clinician from following through on his clinical impression of leptospiral infection.

TREATMENT AND PROGNOSIS

Although in vitro experiments show the leptospirae to be sensitive to penicillin, to tetracycline, and to a lesser extent to chloramphenicol, clinical experience with these agents has been disappointing.[20] However, there is some indication that 24 hour doses of one or two grams of tetracycline or of 2.4 million units of penicillin instituted within the first 24 to 48 hours may have a favorable effect on stopping the disease, or within the first four days on shortening the disease. Apparently none of the antibiotics is effective after four days.[21] Other treatment is entirely symptomatic and supportive.

Prognosis is generally good, especially in anicteric leptospirosis. However, fatalities do occur and one recent report of an epidemic in China

listed a fatality rate of 12 to 15.9 per cent. Deaths usually are due to severe involvement of the kidneys, liver, or heart, or to profuse hemorrhage.[22] Residual damage is infrequent but neurological residual manifestations have been reported,[23] as has iridocyclitis. The latter has been a fairly frequent residual in horses.[24]

SUMMARY AND CONCLUSIONS

Two cases have been presented which are believed to represent instances of infection with leptospiral organisms. The clinical manifestations of leptospirosis have been discussed briefly and some of the difficulties encountered in diagnosis and treatment have been mentioned. It is suggested that the incidence of leptospiral infection may be considerably higher than that which is reported and that this disease should be considered whenever an influenza-like syndrome is accompanied by jaundice or meningeal irritation or particularly by leukocytosis and conjunctivitis. The frequent participation of Deltans in water sports such as swimming and water skiing as well as the presence of known endemic reservoirs of infection in animals in this part of the country would make the likelihood of exposure sufficient to justify consideration of this diagnosis more frequently.

★★★

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The author gratefully acknowledges the epidemiological work performed by Durward L. Blakey, M.D. of the Mississippi State Board of Health and Dominic Tuminello, M.D. of the Bolivar County Health Department.

A WOMAN'S WORLD?

Of the entire crop of 1959 graduates from the nation's co-ed medical schools, 6,324 were men and only 329 were women. *But* the ladies were tops in their class at a good 14 per cent of the schools. Out of the 77 top grads, 66 were men and 11 were women.

Clinicopathological Conference XI

Conducted by the Department of Pathology
Mississippi Baptist Hospital
Jackson, Mississippi

The patient in CPC XI was admitted on July 31, 1960, in a semicomatose state. Just two to three days prior to admission she had complained of shortness of breath, swelling of the legs, poor color, and drowsiness. Principal physical findings were exceeding obesity and cyanosis of the lips and nail beds of both fingers and toes. The patient's clinical course was marked by a rapid deterioration and she died on August 2, 1960. Discussers are Drs. Kenneth M. Heard, William H. Rosenblatt, and H. K. Stauss.

THIS 67-YEAR-OLD white female was admitted to the Mississippi Baptist Hospital on July 31, 1960, and died on August 2, 1960. A complete and detailed history on this patient was not feasible because of the semicomatose state that she was in on admission. According to informants, just two to three days prior to admission she had been complaining of shortness of breath, swelling of the legs, poor color, and drowsiness. Apparently, the patient had been exceedingly overweight and was hypertensive for a number of years but had not gotten into any difficulties until some two to three days prior to admission. Then, in addition to the shortness of breath and pedal edema, she had become increasingly drowsy to the point where she acted as though she were "drugged." Examination of the medications that were in the patient's possession revealed that she had been receiving Diupres "500," one tablet daily for hypertension, and Equanil, 400 mg. three times daily for restlessness. There was no history of digitalis intake in the past. Beyond this, the history taking was fruitless.

PHYSICAL EXAMINATION

Examination revealed a well-developed, exceedingly obese white female with a moon-like facies and an extremely plethoric appearance to the head and neck. She was extremely obese and there was a suggestion of a cervical dorsal hump. The lips and nail beds of both the fingers and toes were unusually cyanotic. Respiration was very shallow and rapid. Most of the respiratory motion was restricted to the extreme lower portions of both hemithoraces. Three to four plus pitting edema was present in both lower extremities extending almost to the knees.

The heart was moderately enlarged to the left on percussion. The rhythm was regular, but rapid, with a ventricular rate of 120 per minute. No murmurs, thrills, shocks, or friction rubs were detected. Examination of the head and neck revealed no abnormalities. The pupils were regular and equal, responding normally to light. Moist inspiratory rales were present over both lung bases. Examination of the abdomen was unsatisfactory due to the tremendous obesity.

TREATMENT ON ADMISSION

Treatment on admission to the hospital included oxygen at 8 liters per minute by tent; Purodigin 0.4 mg. every eight hours for three doses followed by 0.15 mg. as a maintenance dose; Hydropres, 50 mg. with potassium chloride three times a day. A low salt diet was ordered. However, because of the semicomatose state, the following day 5 per cent glucose in distilled water, 1,000 cc. at 45 drops per minute, was prescribed IV and all oral medications discontinued.

LABORATORY DATA

Laboratory data July 31, 1960: Hematocrit 47 volume per cent, hemoglobin 14.6 gm., white blood count 10,100 with 71 segmented neutrophils, 26 lymphocytes, and 3 monocytes. The

platelets appeared adequate. Urinalysis-acid, yellow, clear, specific gravity 1.012, albumin trace and sugar negative; 2 to 3 white blood cells per high power field and a rare red blood cell; 8 to 10 granular casts noted. Blood urea nitrogen was 14 mg. per cent. CO_2 39 mEq per liter; chlorides, 101.7 mEq per liter; potassium, 4.4 mEq per liter, and sodium 151 mEq per liter. VDRL was negative.

CONSULTANT'S EXAMINATION

On August 12, examination by a consultant revealed the following: A critically ill, extremely obese, cyanotic, and plethoric white female in a semicomatose state responsive only to painful stimuli. Her respiration was very rapid and exceedingly shallow with obvious poor gas exchange. The blood pressure was 210/70-60 in right arm (IV drip running in left arm). The pulse was 120/minute and regular. Detailed examination was not possible because of the critical state. All peripheral pulses were palpable and pulsatile.

The heart appeared slightly enlarged to the left on palpation. The rhythm was regular with an apical rate of 120/minute. No murmurs, thrills, shocks, or friction rubs were detected. The lung fields showed only occasional scattered, moist, inspiratory rales in both bases; however, the patient could not be moved for complete examination of lungs. Varicose veins were present in both lower extremities with definite evidence of thrombophlebitis in both calves. There was evidence of recent edema of the lower extremities as manifested by marked wrinkling of the skin with inelasticity over both feet and ankles. A peculiar dusky cyanosis was noted over both malar eminences. The gross neurological examination revealed no localizing signs.

A 12 lead electrocardiogram showed the presence of a sinus trachycardia with atrial and ventricular rates of 120/minute. The PR interval measured 0.16 seconds and the QRS duration 0.06 seconds. The ST segments were sagged in leads 1, 2, and V_4 through V_6. Prominent P waves were present in leads 2, 3 and AVF. Waves with prolongation of QU interval noted in the chest leads.

CLINICAL COURSE

The patient's clinical course was marked by a rapid deterioration, and she was placed in a Drinker respirator with an airway in place at noon on August 2, 1960. However, the cyanosis changed very little, and the patient ceased to breathe suddenly at 2:10 p.m.

Her weight on admission to the hospital was 210 pounds and the blood pressure was 180/100. The blood pressure through her hospital stay ranged from 160/90 to the figure stated on admission.

DISCUSSION

Dr. Kenneth M. Heard: "This is a little unusual presentation today in that we do not have a formal discusser, but shall have a general discussion from the group.

"This was a very obese white female who was 67 years of age. Her weight was listed on the chart as 210 pounds, but at the time of autopsy we felt that was a little short. I don't know who weighed her, but actually she appeared to weigh something like 240 or 250 pounds. About two or three days prior to admission, in addition to shortness of breath which she complained of occasionally, she started to become increasingly drowsy to the point that she acted as though she were drugged. I believe review of the drugs that she had been on, however, failed to indicate anything that could account for this.

PHYSICAL INDICATIONS

"On examination she was extremely obese, as stated, with moon-like facies and an extremely plethoric appearance to the head and neck. The lips and nail beds were unusually cyanotic. Respiration was very shallow and rapid. Most of the respiratory motions were restricted to the extreme lower portions of both hemithoraces. Three to four plus pitting edema was present in both lower extremities extending almost to the knees. The heart was moderately enlarged to the left on percussion. There was a regular rhythm with a rapid rate of 120 per minute. No murmurs, thrills, shocks, or friction rub were detected. She had some inspiratory rales over both lung bases. Treatment on admission to the hospital included placing her in an oxygen tent at the rate of 8 liters per minute. She was given Purodigin 0.4 mg. every eight hours for three doses followed by 0.15 mg. as a maintenance dose. We should have noted before that she had not previously been digitalized. She was also given Chlorthiazide and reserpine and placed on a low salt diet.

"Laboratory data: Hematocrit 47 volume per cent, hemoglobin 14.6 gm., white blood count 10,100 with 71 segmented neutrophils, 26 lymphocytes and 3 monocytes. The urinalysis showed a trace of albumin, 2-3 white blood cells per high power field and a rare red blood cell with 8-10

granular casts. Blood urea nitrogen was 14 mg. per cent. CO_2 39 mEq, chlorides 101.7 mEq, red blood cell potassium 4.4 mEq, and sodium 151 mEq. I think at this point we will ask the consultant to review his findings since he is sitting right here."

CONSULTANT'S FINDINGS

Dr. William H. Rosenblatt: "As you will note on the protocol the picture that this patient presented when I first saw her was one of a critically ill, semicomatose, markedly obese white woman who responded only to painful stimuli. Her respirations were striking in that they were quite shallow and rapid, and it appeared that she was barely breathing with the lowest portions of both sides of her chest. There was an obvious poor exchange of gases. It appeared that the administered oxygen was contributing to the drowsy, semicomatose state. The cyanosis was very marked and refractory to the oxygen therapy. The nail beds were practically black. There was a dusky "doll-faced" cyanosis of the head and neck. The clinical picture resembled Cushing's syndrome.

"You will note here that her blood pressure was 210/70-60 in the left on palpation. This woman was so tremendously obese that she literally draped over the bed. All the peripheral pulses were palpable. I heard no murmurs at all, and no thrill, shock, or friction rub were detected. The lung fields showed only occasional scattered moist inspiratory rales in both bases. There was no edema of the lower extremities. You will note, however, that the attending physician had initially found 3 to 4 plus pitting edema from the feet to the knees. Thus there was evidence of rapid clearing of the edema as manifested by wrinkling and the inelasticity of the skin over both extremities. Pain could be elicited in both calves with a blood pressure cuff inflated to the neighborhood of her systolic pressure. This led me to suspect bilateral thrombophlebitis involving the veins of both calves.

"In spite of her semicomatose state there were actually no localizing neurological signs. The electrocardiogram showed very prominent P waves in leads 2, 3 and AVF, e.g. the so-called "P pulmonal" rather than "P mitral." These are rather tall peaked P waves in contrast to the wide notched P waves seen in rheumatic heart disease. The ST segment changes here were entirely compatible with the administration of digitalis. The prominent T waves seen in the chest leads, along with prolongation of the QU intervals, suggested hypokalemia. However, this was not borne out in the laboratory studies.

"Under the impression that was a case of respiratory acidosis with CO_2 retention and CO_2 narcosis, we attempted to improve her ventilatory function by placing her in a Drinker respirator. As you will note in the protocol, there was no beneficial response whatsoever. She was only in the respirator for a period of about one and a half hours. She suddenly ceased breathing."

Dr. Heard: "I would like to ask Dr. Stauss if he would care to discuss the pathological physiology, particularly in regard to the effect of the oxygen and the background of her difficulty."

PATHOLOGICAL PHYSIOLOGY

Dr. H. K. Stauss: "This patient, although a female, fits into the so-called "Fat Boy Syndrome"[1, 2] in which, because of the tremendous obesity—including the omentum and other fat bearing portions of the abdomen—adequate respiratory excursions are prevented. The diaphragms are pushed up into the chest, thereby leading to marked hypoventilation and particularly uneven ventilation of the lung bases. Another aspect of this is that sometimes there actually may be fatty infiltration of muscles which prevents adequate functioning of the muscles of respiration. The interesting thing is that this syndrome could so precipitously happen in someone who has not progressively gotten fat but has stayed too fat for quite some time. The fact is that these individuals do not ventilate properly—they cannot get rid of CO_2 and therefore will develop hypercapnea and CO_2 narcosis.

EFFECT OF OXYGEN

"It is with this type of patient that one can get into difficulty with administration of continuous high concentrations of oxygen. One can satisfy the oxygen demand fairly readily most of the time and get to the point, as in this case, where the patient still can get rid of the excess CO_2. The Drinker respirator should have been quite a bit of help. Perhaps in this type of patient the newer forms of respirator would have been more beneficial. In these models, the combination of a positive pressure belt which can readily push the diaphragms up, the negative pressure against the chest, and the forceful positive pressure into the tracheobronchial tree promotes better ventilation and sometimes reverses the situation. The new THAM or TRIS carbon dioxide binding blood buffers might also be used to correct the pH and other effects of respiratory acidosis. It appears that this patient might have had an even higher

CO_2 combining power, and she might well have had higher levels terminally.

"Another interesting point is that these people, like the emphysema patients, usually have a high hematocrit and secondary polycythemia. The neurological manifestations are ordinarily the prominent features aside from the grotesque physical appearance. Patients with this syndrome are narcoleptic because of CO_2, occasionally augmented by medications (given because these patients get restless when they get extremely short of breath), and they usually become areflexic. Seldom do they present localizing neurologic manifestations unless there is marked cerebral edema. In this case these may even be the picture of a brain tumor or the syndrome of so-called pseudotumor cerebri.[3]

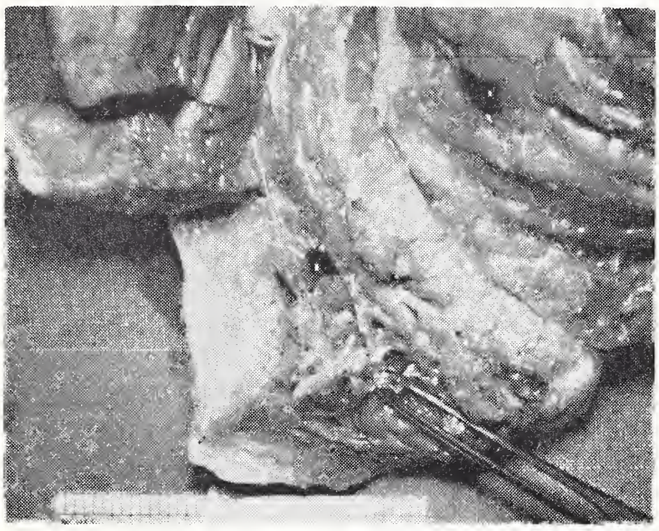

Figure 1. Extreme fatty infiltration of right ventricular myocardium.

LOCALIZED CYANOSIS

"If conscious enough, patients might complain of blurring of vision and diplopia or make athetoid movements and develop convulsions. Another interesting aspect is localized areas of cyanosis. The reason for this is not clearly known. The nail beds, but chiefly the head, neck, and face, are deeply cyanotic. This probably has something to do with cerebral venous circulation since these individuals can develop changes of increases in intracranial venous pressure with or without increased peripheral venous tension and increases in cerebrospinal fluid pressure."

Dr. Heard: "Thank you very much. As you stated when you first started your discussion, this is certainly not a typical so-called Pickwickian syndrome largely because of the suddenness of its onset. I wonder if Dr. Rosenblatt or someone would summarize this for all of us."

PICKWICKIAN SYNDROME

Dr. Rosenblatt: "Actually the Pickwickian syndrome is pretty much as Dr. Stauss described it. These patients are extremely obese and the major apparent physiological defect is the marked restriction of respiratory motion because of the pressure of the obese abdomen with impairment of excursions of the diaphragm. These people do not ventilate well and develop CO_2 retention. They frequently present a typical picture of chronic cor pulmonale and may go into frank right-sided heart failure. The actual mechanism of all this probably hinges on the derangements in respiratory function. The clue in this case so far as the clinical picture of right-sided heart involvement was the very tall P waves in the ECG which were suggestive of pulmonary heart disease. There were no prominent R waves in the right chest leads, no evidence of right bundle branch block either complete or incomplete, and there was no significant shift of the transitional zone."

Dr. Heard: "Thank you. The main point I had in mind when I asked that question was the unusual chronicity of this condition pointed out by Dr. Stauss. I think that is most interesting in this case, i.e. that it started so suddenly. Possibly she had been having symptoms that were not elicited by the historian."

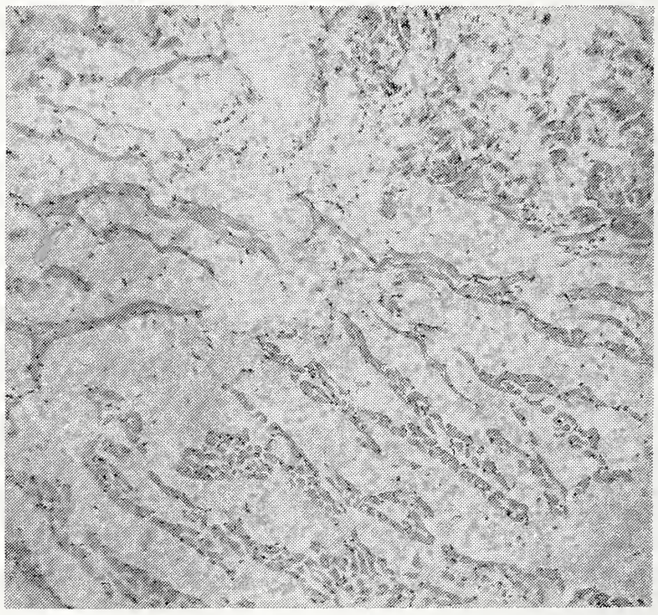

Figure 2. Photomicrograph showing extensive fatty infiltration. Note large clear fat cells separating muscle fibers.

Dr. Rosenblatt: "That's correct. The history was very inadequate. We could not get any information from the patient and the family had not seen her for a long time until the onset of her 'drugged' behavior previously described."

AUTOPSY REPORT

Dr. Heard: "We definitely felt that this was the primary cause of death in this woman. At autopsy she was certainly not in congestive failure. At the time of autopsy the lungs were not wet and we saw no evidence of peripheral edema. There was nothing in the liver to indicate right-sided failure.

"The most interesting pathological finding, however, was the appearance of the heart. Its weight was 700 gm. There was a massive amount of pericardial fat. We do not know what the heart actually weighed. There was some hypertrophy, however, on the basis of her previous hypertension. Within the right ventricle there was extreme fatty infiltration so that the right ventricle at some points in the lateral wall was well over a centimeter in thickness (Figure 1). The normal thickness is about 0.3 centimeter. On microscopial examination it was almost completely replaced with fat with very few muscle fibers remaining (Figure 2). In addition to the involvement of the right ventricle there was also some involvement of the interventricular septum by this fatty infiltration.

"The question that comes to mind is what role, if any, did this fatty infiltration of the heart play in this patient's demise. This is something that has been kicked around by cardiologists through the years, I believe, with most people feeling that this fatty infiltration is usually of no clinical significance, although some cases have been reported in which it undoubtedly was with changes in ECG and other significant findings. Such a case was reported in the *New England Journal of Medicine* several years ago, being discussed by Dr. Paul White.[4] I'd like to ask Dr. Rosenblatt and other people here what they think of the significance of fatty infiltration of the myocardium."

Dr. Rosenblatt: "Actually it's not too farfetched to assume that myocardial failure could occur with fatty infiltration of the heart such as this woman had, as we find in extensive arteriosclerotic heart disease with myocardial scarring. I would say that since the fatty infiltration involved the right ventricle, it could have accounted for the clinical picture of right-sided heart failure noted the day before I saw her. My own feeling is that the mechanism of this woman's demise was a chemical death from carbon dioxide retention, with CO_2 narcosis that was aggravated by the administration of oxygen, the anoxic stimulus to respiration being removed."

ANATOMICAL DIAGNOSES

Dr. Heard: "This is the second case that we have presented at these conferences in which we felt that CO_2 narcosis was the primary cause of death. The other was a typical case of chronic lung disease with extensive emphysema occurring in a physician who was incidentally "addicted" to oxygen. Again I believe that it helped him on his way out.

"The chief anatomical diagnoses were extreme obesity, myocardial hypertrophy, and extreme fatty infiltration of the myocardium particularly in the right ventricle and posterior aspect of the interventricular septum. Any other comments?"

Dr. Stauss: "What did the brain look like?"

Dr. Heard: "The brain was actually not as edematous as we might have expected it to be, but there was some flattening of the gyri and narrowing of the sulci and a little suggestion of cerebellar pressure cone." ★★★

1190 North State Street

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OUTPATIENT CARE

A pretty nursing student and her intern fiancé had just broken their engagement.

"Do you mean to say," exclaimed her friend, wide-eyed, "he actually asked you to give back the ring?"

"Not only that," sniffed the young nurse, "he sent me a bill for 36 visits!"

MEETINGS

NATIONAL AND REGIONAL

American Medical Association, November 28-December 1, 1960, Washington, D. C. F. J. L. Blasingame, Executive Vice President, 535 N. Dearborn St., Chicago 10, Ill.

American Academy of General Practice, April 13-20, 1961, Miami Beach, Florida. Mr. Mac F. Cahal, Executive Director, Volker at Brookside, Kansas City 12, Mo.

American College of Surgeons, Sectional Meeting, January 16-18, 1961, Birmingham, Ala. Arthur I. Chenowith, Local Chairman, 2618 10th Ave. S., Birmingham, Ala.

Southern Society of Anesthesiologists, March 9-11, 1961, Jackson. Curtis Caine, local arrangements committee, 4332 Manhattan Road, Jackson.

STATE AND LOCAL

Mississippi State Medical Association, May 9-11, 1961, Biloxi. Mr. Rowland B. Kennedy, Executive Secretary, 735 Riverside Drive, Jackson.

Mississippi Society of Internal Medicine, May 8, 1961, Biloxi. Frederick E. Tatum, Secretary, 707 Katie Ave., Hattiesburg.

Amite-Wilkinson Counties Medical Society, First Tuesday March, June, September, December. S. E. Field, Centreville, Secretary.

Central Medical Society, First Tuesday Monthly, 6:30 p.m., Robert E. Lee Hotel, Jackson. C. G. Sutherland, 918 N. State St., Jackson, Secretary.

Claiborne County Medical Society. D. M. Segrest, Port Gibson, Secretary.

Clarksdale and Six Counties Medical Society, Second Wednesday March and November, 2:00 p.m., Clarksdale. Robert R. McGee, 150 Yazoo Ave., Clarksdale, Secretary.

Coast Counties Medical Society, First Wednesday March, June, September, and November. Charles N. Floyd, 1412-23rd Ave., Gulfport, Secretary.

Delta Medical Society, Second Wednesday April and October. Howard A. Nelson, 308 Fulton St., Greenwood, Secretary.

DeSoto County Medical Society, Second Thursday January, April, July, and October, 1:00 p.m., Hernando Motel Cafe, Hernando. L. L. Minor, Route 9, Memphis 9, Tenn., Secretary.

East Mississippi Medical Society, First Tuesday February, April, June, August, October, and December. A. Wayne Sullivan, 1204-21st Ave., Meridian, Secretary.

Homochitto Valley Medical Society, Fourth Tuesday Monthly, 7:30 p.m., Natchez Country Club, Natchez. W. T. Colbert, Natchez General Hospital, Natchez, Secretary.

North Central District Medical Society, Second Wednesday March and September. W. A. Middleton, 214 Summit St., Winona, Secretary.

Northeast Mississippi Medical Society, Second Tuesday March, June, September, and December, Tupelo. Eugene M. Murphey, III, 421 Main St., Tupelo, Secretary.

North Mississippi Medical Society, First Thursday January, April, and October, Oxford. R. L. Wyatt, Holly Springs, Secretary.

Pearl River County Medical Society, Second Monday March, June, September, and December. George B. Stewart, 139 Kirkwood St., Picayune, Secretary.

South Mississippi Medical Society, Second Thursday March, June, September, and December. Thomas F. Puckett, 715 Arledge St., Hattiesburg, Secretary.

Tri-County Medical Society, Second Tuesday March, June, September, and December. A. V. Beacham, Magnolia, Secretary.

West Mississippi Medical Society, Second Tuesday January, April, July, and October, 7:00 p.m., Old Southern Tea Room, Vicksburg. Tom H. Mitchell, The Street Clinic, Vicksburg, Secretary.

JOURNAL OF THE
MISSISSIPPI STATE
MEDICAL ASSOCIATION

Volume I, Number 12

December 1960

What's in a Name?

THOMAS J. MARLAND, M.D.
Jackson, Mississippi

MANY DISEASES and syndromes are known primarily by the men who first recognized and described them. Because of this there has been a certain amount of confusion surrounding some of the clinical entities that doctors must diagnose and treat. The medical profession has been rather reluctant to change this custom and there are probably some good reasons. First, there is the sentimental element. In many cases, naming the condition after the man that discovered it was the only recognition he received. Furthermore, the man's name was retained because there was nothing better to call it. Buerger's Disease is a good case in point. We are all familiar with the classic description of this syndrome, and for many years this particular vascular condition was and still is known by the name of the astute physician that described it. However, S. Wessler and others have expressed strong skepticism concerning this as a separate entity. After studying the pathogenesis of this disease from several different aspects, they came to the conclusion that the condition known as Buerger's Disease is indistinguishable from atherosclerosis, systemic embolization or peripheral thrombosis either singly or in combination. They therefore conclude that the term should be discarded.

Contact Lenses

Doctors always seem to be exposed to pressures from their patients to try a new drug, institute a new program of treatment, or in some way keep up with the Paul De Kruifs of the lay press. More recently we have had the pressure of contact lenses to cope with. It is perhaps too early to pass this off as a mere fad because there is too much potential involved. Teen-agers particularly are interested in these substitutes for glasses for one reason or another. However, we are obligated to emphasize the dangers and complications that may result from the indiscriminate and unsupervised use of these lenses. Some of the complications resulting from contact lenses are: superficial punctate keratitis, confluent superficial erosion, full thickness epithelial abrasion, micro-organismal infection of an abrasion with hypopyon,

corneal edema, perforation of an ulcer, and endophthalmitis.

In many instances, however, contact lenses are worn with much success and have fulfilled the purpose for which they are intended. The close supervision of an ophthalmologist is of utmost importance to prevent the damaging complications mentioned above.—T. J. M.

Genetics—A New Medical 'Must'

Genetics is rapidly finding its way into ordinary medical conversation. In the very recent past, the subject of genetics as applied to medicine was ignored and generally thought to possess a very nebulous and highly theoretical application for physicians in the actual practice of medicine. However, it is not unusual to pick up a current medical publication and find some aspect of this subject discussed. We are beginning to probe farther than the "X" and "Y" chromosomes. We are beginning to learn of the chromosomal character of cells. The chemistry of genetics is receiving more than a passing interest. As doctors we are becoming more concerned with the familial significance of a growing list of medical abnormalities. And as a sign of the times, the specialty boards are beginning to include questions on genetics in their examinations. So whether we like it or not, it looks as though we will have to familiarize ourselves with as much of genetics as we can absorb.—T. J. M.

LETTERS

SIRS: From all accounts the Southern Regional Medical Library Association Meeting was a great success and we thank you and your associates for helping us to get off to a good start with the cordial welcome accorded through the Open House, Thursday, October 20. Everything seemed to run smoothly, the program was an excellent one, and the special events made a good impression on behalf of Mississippi. I was delighted to have a part in bringing this group to our state for a close-up of some of our fine facilities depicting an area that is really progressive.

If at any time our library can be of assistance to you, do feel free to call upon us.

E. LOUISE WILLIAMS
LIBRARIAN, MISSISSIPPI STATE BOARD OF HEALTH
JACKSON, MISSISSIPPI

Journal MSMA was honored to have had the privilege of greeting the southern medical librarians in behalf of all association members. This able group is contributing substantially to medicine through their special skills in library science. —The Editors

NEW MEMBERS

AUSTIN, DUFF DAVID, JR., Newton. Born Harperville, Miss., Sept. 6, 1926; M.D., University of Mississippi School of Medicine, Jackson, 1959; interned The Moses H. Cone Memorial Hospital, Greensboro, N. C.; USAF one year; elected Oct. 4, 1960, by East Mississippi Medical Society.

BARNES, HELEN BEATRICE, Greenwood. Born Jackson, Miss., Dec. 9, 1928; M.D., Howard University, Washington, D. C., 1958; interned Kings County Hospital, Brooklyn, N. Y.; Ob-Gyn residency, Kings County Hospital, Brooklyn, N. Y., one year; elected to scientific membership Oct. 12, 1960, by Delta Medical Society.

COOPER, CHARLES WALTER, Fayette. Born Bude, Miss., May 19, 1935; M.D., University of Mississippi School of Medicine, Jackson, 1959; interned Lloyd Noland Hospital, Fairfield, Ala.; elected Sept. 24, 1960, by Homochitto Valley Medical Society.

DAVIDSON, LITTLETON STACY, JR., Cleveland. Born Pope, Miss., Dec. 19, 1932; M.D., University of Mississippi School of Medicine, Jackson, 1957; interned Jefferson Davis Hospital, Houston, Texas; Captain, U. S. Army, two years; elected Oct. 12, 1960, by Delta Medical Society.

DAVIS, JOHN IVY, Natchez. Born Utica, Miss., Nov. 21, 1928; M.D., Washington University, St. Louis, Mo., 1955; interned University Medical Center, Jackson; internal medicine residency University Medical Center, Jackson, three years; Sergeant, U.S.A.F., three years; elected Sept. 24, 1960, by Homochitto Valley Medical Society.

Derian, Paul Sahak, Jackson. Born Long Island, N. Y., July 25, 1922; M.D., University of Virginia, Charlottesville, 1951; interned St. Vincents Hospital, New York City, N. Y.; orthopedic surgery residencies, University of Virginia, five years; Fellow National Foundation for Infantile Paralysis, two years; member Research Society of America; U. S. Naval Reserve, three years; elected Aug. 2, 1960, by Central Medical Society.

Gilliland, John Campbell, Jackson. Born Jackson, Miss., Oct. 6, 1932; M.D., University of Mississippi School of Medicine, Jackson, 1957; interned University Medical Center, Jackson; pediatrics residencies University Medical Center, Jackson, one year, and Grace New Haven Community Hospital, New Haven, Connecticut, one year; clinical instructor of pediatrics and chief of pediatric out-patient department, University Medical Center, Jackson; elected Oct. 4, 1960, by Central Medical Society.

Godfrey, William Edward, II, Natchez. Born Kenton, Ohio, Feb. 18, 1924; M.D., Louisiana State University School of Medicine, New Orleans, 1956; interned Confederate Memorial Medical Center, Shreveport, La.; Ob-Gyn residency, Confederate Memorial Medical Center, Shreveport, La., three years; First Lieutenant, U. S. Army, three years; elected Sept. 24, 1960, by Homochitto Valley Medical Society.

"I get air sick."

Hunter, Patrick Russell, Greenville. Born Texarkana, Texas, Sept. 3, 1928; M.D., Louisiana State University School of Medicine, New Orleans, 1953; interned Charity Hospital, New Orleans, La.; surgical residency Charity Hospital, New Orleans, La., four years; Captain, U. S. Air Force, two years; elected Oct. 12, 1960, by Delta Medical Society.

Jones, Julian Foy, Olive Branch. Born Walnut Grove, Miss., March 12, 1928; M.D., University of Tennessee School of Medicine, Memphis, 1956; interned John Gaston Hospital, Memphis, Tenn.; elected Oct. 20, 1960, by DeSoto County Medical Society.

Nelson, Phil Otis, Cleveland. Born Silver Creek, Miss., Dec. 21, 1934; M.D., University of Mississippi School of Medicine, Jackson, 1958; interned University of Arkansas Medical Center, Little Rock; elected Oct. 12, 1960, by Delta Medical Society.

Pennington, Luther Thomas, Meridian. Born Matthews, Ga., Feb. 21, 1921; M.D., Medical College of Georgia, Augusta, 1943; interned Duval County Hospital, Jacksonville, Fla.; urology residency, Grady Hospital of Emory University, Atlanta, Ga., three years; genito-urinary pathology fellowship Moses Cone Hospital, University of North Carolina Medical School, Chapel Hill, and Armed Forces Institute of Pathology, two years; Lieutenant U. S. Army, two years; elected Oct. 4, 1960, by East Mississippi Medical Society.

Stanley, Thomas Valentine, Jr., Greenwood. Born Memphis, Tenn., May 27, 1929; M.D., University of Tennessee School of Medicine, Memphis, 1953; interned John Gaston Hospital, Memphis; general surgery residency University Medical Center, Jackson, Miss., four years; Captain, U. S. Air Force, three years; elected Oct. 12, 1960, by Delta Medical Society.

Tumlinson, William Blackwell, Jackson. Born West Point, Miss., March 23, 1926; M.D., University of Mississippi School of Medicine, Jackson, 1959; interned Mississippi Baptist Hospital, Jackson; Ensign, U. S. Navy, two years; elected Oct. 4, 1960, by Central Medical Society.

Wooley, Otis Burton, Jr., Jackson. Born Marks, Miss., Nov. 2, 1928; M.D., Vanderbilt University School of Medicine, Nashville, Tenn., 1956; interned Vanderbilt University Hospital, Nashville; Ob-Gyn residency, Vanderbilt University Hospital, three years; elected Oct. 4, 1960, by Central Medical Society.

TRUSTEES, COUNCILS, AND COMMITTEES

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Omar Simmons, Newton (1963)
A. T. Tatum, Petal (1961)
G. Swink Hicks, Natchez (1961)
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Reuben H. McArthur, Jr., Jackson, EENT
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Eugene M. Murphey, III, Tupelo, Medicine
Carl E. Lewis, Jackson, Ob-Gyn
W. Q. Cole, Jackson, Pediatrics
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J. T. Davis, Corinth (1962)
Mal S. Riddell, Winona (1963)
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C. B. Mitchell, Jr., Meridian (1963)
Charles R. Gillespie, Laurel (1961)
William T. Harper, Fayette (1961)
S. B. McIlwain, Pascagoula (1961)

Book Reviews

Occupational Diseases and Industrial Medicine. By Rutherford T. Johnstone, M.D., and Seward E. Miller, M.D. Illustrated with 482 pages. Philadelphia-London: W. B. Saunders Company, 1960. $12.00.

The authors state that this book was written for practitioners, students, and teachers, especially as a textbook for the new specialty of occupational medicine. A concise description of the scope of industrial practice and the role of the physician is presented.

Chapters 4 and 6 which deal with Workmen's Compensation and Rehabilitation I recommend for careful reading by physicians in every field who are called upon to even occasionally treat or examine the occupationally disabled worker. These chapters with Chapter 7 entitled "The Diagnosis of Occupational Diseases" gives the physician a good concept of his responsibilities in such cases. These chapters present a sound philosophy in regard to purposes of Workmen's Compensation, employment of the physically handicapped and rehabilitation. This philosophy is closely paralleled by policies previously approved in these fields by the Mississippi State Medical Association House of Delegates.

The remaining portions of the book are devoted to short descriptions of chemicals, gases, dusts, physical agents and radiation which might be productive of occupational diseases and therefore might be considered a handy reference for one who needs such information.

The appendix lists threshold limit values for dangerous exposure to various gases, vapors, and dusts. The glossary lists and defines industrial terms which should be useful to the physician in interpreting some history he obtains from workmen.

Access to this book is desirable for the physician who does any industrial practice.

In criticism, there is poor ink distribution on the type of many pages of the copy I have in my library.

George D. Purvis, M.D.

Domestic Journals

Transverse Fetal Presentation. Thomas Frere Kramer and Thomas W. Skalley, Am. J. Obst. & Gynec. 80:291, 1960.

Drs. Kramer and Skalley viewed 103 instances of transverse fetal presentation occurring at Charity Hospital of Louisiana in the years 1953 to 1958. Excluded from this study were transverse presentations which were corrected by external version and those spontaneously converting to vertex or breech presentations. Infants weighing under 1,500 gm. and twins were also excluded.

Etiological factors are discussed and the following are significant. The incidence in the Negro and white races was essentially the same: 44.7 per cent were over 30 years of age and 15.5 per cent were over 35 years; 73 per cent were para 3 or more, and placenta praevia was present in 15.5 per cent. Two patients had polyhydramnios, and one had leiomyomas obstructing the birth canal.

In the handling of transverse presentations the authors strongly urge that delivery be accomplished as quickly as possible and are able to show an increasing fetal mortality associated with delay. Of their cases 86.4 per cent were delivered by cesarean section with a preference for a vertical laparotrachelotomy. Version and extraction was employed uncommonly and prerequisites were full cervical dilatation upon admission and unruptured or very recently ruptured membranes. Cephalopelvic disproportion and placenta praevia are definite contraindications.

W. B. Inmon, M.D.

Some Specific Causes of Delinquency and Sexual Deviations. Berthold E. Schwarz and Bartholomew A. Ruggieri, J. Med. Soc. N. J. 55:193-196 (May) 1958.

By the use of collaborative research and therapy, in which two or more physicians simultaneously treat the child, his parents, and possibly other family members, considerable advances have been made in isolating and understanding the specific causes of a variety of emotional disturbances and deviant behavior patterns. The

specific behavior pattern of the child is a reflection of highly specific problems in the make-up of the parents. Thus, although society is able to recognize with approval the understandable gratification received by the parent from the socially commendable achievements of the child, it is not generally recognized that a parent may also get gratification from the antisocial acts of his child.

The parent may have an urge to act out his emotional problems in a way which society would condemn. Because of this condemnation the parent does not act in this way. Instead he obtains vicarious gratification through his child's antisocial impulses, which he subtly encourages. (It must be stressed that the parent's destructive impulses are usually unconscious and that he is not aware of his role in communicating these urges to the child.) The child reacts appropriately, reinforces the parent's unconscious action, and so a cycle is established. And society condemns the child and commiserates with the parent!

Because of the prevalence of such patterns, it is essential for every physician to have at least a recognition knowledge of such mechanisms and their probable genesis. If, instead of sitting in judgment, the physician looks further into the causes of childhood deviant behavior, he will see that the parent's unconscious attitudes, healthy or unhealthy, are themselves derived in turn from experiences with his or her own parents. Thus the emotional attitudes of one generation are passed on to the next, and the parent of a child who is emotionally ill may therefore not be to "blame." Although no blame is involved, it is, of course, still the parent's responsibility for seeking help. Interestingly enough, these patients, parents and children, are difficult to manage and may possess extreme skill, often unconscious, in securing the unwitting help, of physicians and others, in helping them act out their antisocial impulses.

Careful investigation can usually reveal the probable reasons for a child's specific delinquency. Thus aberrations in the child stem from sexual maladjustment in the parent. Confusion for the child may be caused by the practice of some "modern" parents of sleeping or bathing with an older child of the opposite sex. Under the guise of parental love, seductive whispers and fondlings, best reserved for the relationships between the parents themselves, may be shared between parent and child. In such situations the child may be thrust into competition with the parent of the same sex for the attentions of the parent of the opposite sex. The child is now placed in futile competition with a bigger adult on whom he depends and whom he respects and loves. As these conflicting forces combine, guilt, fear and anger appear in the child.

FLOY JACK MOORE, M.D.

Lawrence Upholds Pennsylvania Physicians

Pennsylvania's Governor David L. Lawrence spoke up for Keystone state physicians during the recent highway safety conference where newsmen beamed pointed questions on the new requirement for physical examinations for driver licenses.

Asked if doctors were ". . . merely filling out the form and signing it, rather than giving physicals" because of so few denials, Governor Lawrence pointed out that 64 per cent of all applicants were only 18 years of age or under. He asserted that ". . . Pennsylvania doctors are honest and live by the Hippocratic Oath."

The governor called cooperation of the medical profession outstanding, pointing out that physical standards for driver licensing were established by physicians themselves. The new program was initiated by Governor Lawrence as a highway safety measure to reduce accidental injury and death from motor vehicle mishaps.

"What were you doing out on a night like this?"

Essayists From Six States Speak to Physicians at Annual Meeting of Gulf Coast Clinical Society

Scientific essayists from six states appeared before the 20th annual meeting of the Gulf Coast Clinical Society, October 12-13, at Biloxi, as physician-members from Louisiana, Mississippi, and Florida turned out for the conclave. Presiding over the meeting was Dr. C. D. Taylor, Jr., Pass Christian, GCCS president for 1959-60, and a member of MSMA's Board of Trustees.

Dr. J. W. Douglas, right, of Pensacola, named president of the Gulf Coast Clinical Society at that organization's meeting October 12 and 13, is congratulated by Dr. C. D. Taylor, left, of Pass Christian, retiring president, as Dr. E. T. Riemann, Gulfport, retiring secretary-treasurer, looks on. New officers not pictured include: Dr. Theo F. Middleton, Mobile, first-vice-president; Dr. F. C. Minkler, Pascagoula, second-vice-president, and Dr. Gerard Hilbert, Pensacola, secretary-treasurer.

Social feature was a fellowship hour and banquet October 12. Registrants became eligible for eight hours Category I postgraduate training credit in the American Academy of General Practice.

Program highlights included presentations in the fields of general surgery, obstetrics and gynecology, virology, internal medicine, and cardiovascular research. Notre Dame's Dr. Thomas G. Ward spoke on "Viruses and Cancer"; Dr. Duane Carr, Memphis, "Hiatus Hernia"; Dr. Charles Flowers, Chapel Hill, N. C., "Management of the Patient With Toxemia of Pregnancy"; and Dr. G. C. Chiu, Indianapolis, "Current Concept of Atherogenesis and Its Therapeutic Approach."

Second day scientific features were "Clinical Problems in Obesity," Dr. I. Frank Tullis, Memphis; "Non-penetrating Trauma to the Liver," Dr. J. Richard Smerson, Atlanta; and "Acute Rheumatic Fever," Dr. Samuel Kaplan, Cincinnati. An October 13 highlight was a clinicopathological conference following lunch. Afternoon sessions included case presentations.

Dr. B. B. O'Mara, Biloxi, past president of MSMA and current speaker of the House of Delegates, extended official greetings to registrants during opening ceremonies. Dr. J. William Douglas, Pensacola, Fla., was inaugurated president for 1960-61 while members named Dr. Theo F. Middleton, Mobile, first vice president, traditional stepping stone to the presidency. Dr. Frederick C. Minkler, Pascagoula, was named second vice president and Dr. Gerald Hilbert, Pensacola, secretary-treasurer.

Whitaker Named President of West Society

Dr. Thurston Whitaker, Vicksburg, was named to succeed Dr. L. G. Horn, Vicksburg, as president of the West Mississippi Medical Society at the group's meeting on Oct. 11.

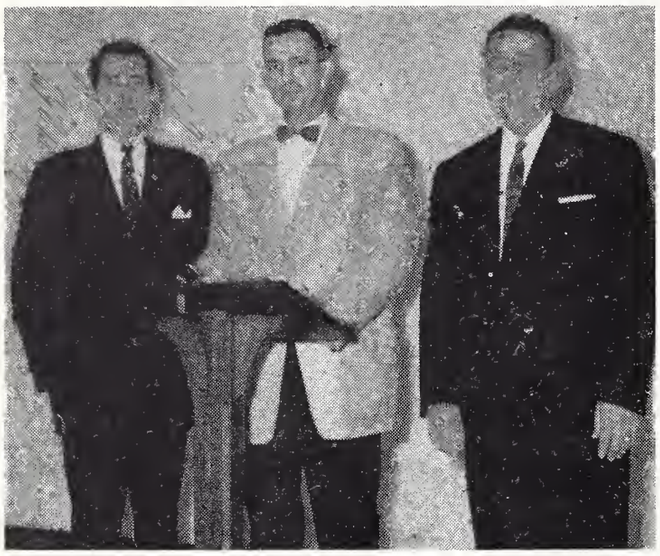
Other officers elected were Dr. Donald Feibelman, Vicksburg, vice president; Dr. J. A. K. Birchett, Vicksburg, delegate to MSMA for Warren County; Dr. W. C. Pool, Cary, delegate to MSMA from Sharkey County, and Dr. Tom Mitchell, Vicksburg, secretary-treasurer.

Guest speaker for the program was Dr. Daniel Riordon of New Orleans whose topic was "Rehabilitation of the Rheumatoid Hand."

100 Attend Delta Society Meeting

One hundred Delta doctors met in Belzoni on Oct. 12 for the 74th Semi-Annual Meeting of the Delta Medical Society.

Highlight of the day's program was the afternoon scientfic session featuring five original papers and a discussion panel. During the closing business session Dr. R. F. Spaulding, Arcola, was named persident-elect. Dr. John S. Barr, Belzoni, succeeded Dr. A. A. Aden, Indianola, as president, and Dr. Howard A. Nelson, Greenwood, was re-elected secretary-treasurer.



New Officers of Delta Medical Society take time out to pose for Journal MSMA's camera at the group's Oct. 12 meeting. From left to right are Drs. Howard A. Nelson, who was re-elected secretary-treasurer; John S. Barr, president, and R. F. Spaulding, president-elect.

Other officers named were Dr. S. G. Mounger, Greenwood, who was re-elected vice president, and Dr. Jimmy Newton, Greenville, who succeeded Dr. Spaulding as vice president. Dr. John M. Alford, Jr., Greenwood, was elected delegate to MSMA, and Dr. Jones W. Lamb, Greenwood, alternate delegate.

First up on the scientific program was Dr. Barr, who spoke on "Gallbladder Surgery in the Aged." Discusser was Dr. Thomas G. Barnes, Greenville. Dr. John G. Egger, Drew, followed with a paper on "Treatment of Burns in a Small Hospital" which was discussed by Dr. Virginia S. Tolbert, Ruleville.

For the first time, a panel on socioeconomics was included on the scientific program. Panelists considered the topic "Adoptions—the Responsibilities of Medicine, Law, and the Social Worker." Dr. Nelson spoke for the doctors, Norman Brewer, attorney-at-law from Greenwood, for the lawyers, and James R. Stokes, program director, Foster Care Section, Department of Public Welfare, for the social workers.

Following the panel, Dr. Robert S. Spain talked on "Leptospiral Infections." Discussion was by Dr. E. T. White, Greenville.

Dr. Douglas H. Riddell, associate professor of surgery, Vanderbilt University School of Medicine, served as out-of-state lecturer. Introduced by his father Dr. T. M. Riddell, a vice president of the society, he spoke on "Evaluation and Surgical Treatment of Scalenus Anticus Symptoms."

Guest essayist Dr. Paul Derian closed the scientific session with a paper on "Management of Fractures in Children." He is chairman of the department of orthopedics, University of Mississippi School of Medicine, Jackson.

During the following business session, Dr. G. Swink Hicks, Natchez, MSMA president, gave a brief talk.

Physicians' Girls Friday Hold Conclave

Greater cooperation with physicians in serving the health needs of the public was pledged by the new president of the American Association of Medical Assistants at the recent fourth annual meeting in Dallas, Texas.

In her inaugural address, Mrs. Virginia Dougherty of Philadelphia told the AAMA convention that ". . . the medical assistant's opportunities for service to patients and the public have never been greater than right now."

Two other medical leaders who agreed that the public relations potential of the woman who is employed in the doctor's office is unlimited were the president of the American Medical Association and the president of the Texas Medical Association.

Dr. E. Vincent Askey of Los Angeles, AMA president, told AAMA members that a good medical assistant is among a doctor's greatest assets.

Dr. May Owen of Fort Worth, TMA president, said that ". . . new avenues of treatment and techniques opening before us require that not only physicians but medical assistants play a vital part in patient care."

More than 400 women employed as nurses, medical secretaries and medical assistants in physicians' offices throughout the country attended the three-day educational program and business sessions.

UMC Sponsors Circuit Courses

The University Medical Center is sponsoring for the second year a series of Circuit Courses which will be presented in five Mississippi towns.

Designed to help state physicians keep abreast of recent developments in diagnosing and treating illness, the courses are planned by the UMC Postgraduate Education Committee with the cooperation of MSMA and the Mississippi Academy of General Practice.

The 1960 Circuit Course got underway in Tupelo and Greenwood the last week in October. Teams of three physicians gave one program a week for four consecutive weeks, covering a different field of medicine each session.

The series will begin in Gulfport on Jan. 11, Hattiesburg, Jan. 12, and Meridian on March 3.

Hospital Public Relations Conference Held in Biloxi

Helming the Hospital Public Relations Conference in Biloxi October 17 and 18 were, left to right: Reed B. Hogan, Clarksdale, president of the Mississippi Hospital Association; S. B. Wise, secretary-treasurer of the Mississippi Association of Hospital Governing Boards; C. J. Foley, public relations consultant, Wayne, Illinois; Richard C. Williams, Jackson, executive director, Mississippi Hospital and Medical Service; and Charles Flynn, Jackson, executive director, Mississippi Hospital Association.

Medical Journal Representatives Meet

Representatives of state medical journals from Mississippi to Michigan met Oct. 15 and 16 in Lexington, Ky. The occasion was the Third Regional State Medical Editors Conference.

During the fast moving, tightly packed program, editors and staff members considered the problems unique to state medical journals. Particular areas of discussion were the obtaining of scientific articles, standards of make-up, the contents of the editorial page, and the function of the medical journal.

Speakers for the program came from varied angles of medical journalism. Some were physicians, some journalists, some administrators. All points of view were considered from the drug manufacturer who pays the bills to the doctor who reads the journal.

Extracurricular activities included a tour of the new University of Kentucky Medical Center. The University also contributed the services of Professor J. A. McCauley of the School of Journalism who rated the journals by typographical standards.

Approximately 50 staff members attended the conference. Miss Betty Miller, JOURNAL MSMA editorial assistant, represented the Mississippi publication.

Nu Sigma Nu Chapter Installed at UMC

Gamma Beta chapter of Nu Sigma Nu national medical fraternity was installed on the University Medical Center campus on Oct. 23.

Dr. James Royals of Jackson represented the national fraternity as installing officer. He is president of the Mississippi Nu Sigma Nu Alumni.

Members of the Tulane School of Medicine active chapter initiated the members from the University of Mississippi School of Medicine.

The new chapter was organized as the Galen Society at the medical school in Jackson in 1958. Beginning with eight members, it has progressed to 21 and won the interfraternity award for top scholastic performance among UMC fraternities in February, 1960.

Officers of the new chapter are Cecil T. Williams, Jr., of Laurel, president; Ray L. Wesson of McComb, vice president; George Douglas Cain of McCall Creek, secretary; Raymond Viggo Lassen, Jr., of Booneville, treasurer; Thomas E. Corley of Moss Point, historian, and Charles H. Hubbert of Grenada, custodian.

Copeland, Hooper Receive Fifty Year Club Pins

Fifty Year Club pins and certificates were awarded to Dr. E. A. Copeland and Dr. Sam J. Hooper, both of Jackson, at the Nov. 1 meeting

At the recent meeting of the Central Medical Society, two Jackson doctors were presented Fifty Year Club certificates and memberships. Left to right, Dr. Stirling McNair, making the presentation to Dr. E. A. Copeland and Dr. Sam J. Hooper.

of Central Medical Society. Dr. Stirling McNair, Jackson, made the presentations.

During the business session of the meeting Dr. Clyde A. Watkins, Sanatorium, was inaugurated president. Dr. C. G. Sutherland, Jackson, was named president-elect and Dr. George E. Gillespie, Jackson, secretary-treasurer.

Vice presidents selected were Drs. W. C. Shands, Jackson, Hinds County; William M. Wood, Carthage, Leake County; J. W. Terry, Canton, Madison County; Richard E. Schuster, Brandon, Rankin County; J. W. Austin, Forest, Scott County; James O. Stephens, Magee, Simpson County; W. M. Coursey, Raleigh, Smith County, and R. J. Moorhead, Yazoo City, Yazoo County.

Mississippi Blues Has Master Health Plan

Mississippi Blue Cross-Blue Shield's new "Master Health Plan" is the organization's latest major illness additional service rider being offered its 350,000 members throughout the state. The new program, believed by plan officials at Jackson to be the first in the nation, will cover services not usually found in conventional hospital and surgical contracts.

The new add-on is available to non-group holders of the "J" series deductible contracts who are under age 65 and in good health. Divided into three parts, the rider provides outpatient diagnostic x-ray and laboratory service up to a $50 annual maximum paid on an indemnity basis. Amounts allowed, plan spokesmen said, closely approximate or are equal to present charges of physicians.

A second feature is an allowance up to $300 for minor accidental injury care either in or out of the hospital. This facet should be especially attractive to parents who experience out-of-pocket care costs for children's accidents.

Third point in the new plan is a $5,000 major medical coverage for long term catastrophic type illness or injury. When all other benefits of the patient's contract have been used and after the patient has paid $100 from personal funds, the major medical clause becomes operative, paying 75 per cent of the remaining expense directly connected with treatment of the condition, including prescriptions, home and office visits, private duty nurses, and other services. The maximum payable during a two year period for each illness is $5,000. To discourage misuse, the contract requires that major medical expenses be incurred within a 90 day period. When a patient has been discharged from care and no treatment has been rendered for 90 days, the major medical benefits are terminated. Each reactivated illness as well as new ones must pass through the $100 personal expense corridor.

Richard C. Williams, Jackson, Blue Cross-Blue Shield executive director, said that ". . . with mounting interest of the federal government in medical care and public concern over care costs, it is necessary for prepayment programs to keep pace by expanding services to meet public need. The 'Master Health Plan' was designed for this purpose and with an assist from the doctors and the public, socialized medicine can be pushed farther into the background."

State Medical Technologists Host Jackson Meeting

The Mississippi State Society of Medical Technologists was host to the Tennessee and Louisiana State Societies for the first Tri-State Seminar held in Jackson on Oct. 21 and 22.

Keynote speakers from the University of Mississippi School of Medicine included Drs. Fred Allison, Jr., Warren N. Bell, James D. Hardy, Catherine Goetz, and Miss Lucy Lawson.

Most Americans See Doctor Five Times Yearly

Mr. John Q. Public, the statistical average of all Americans, consults his physician five times annually. This is the recent finding of the Health Insurance Institute, a research organization sponsored by the insurance industry. The survey analysis disclosed that this adds up to more than 852 million visits to a physician each year, based upon data collected by the U. S. Department of Health, Education, and Welfare during a 24 month period from July 1957 through June 1959. The data exclude visits by physicians to hospitalized patients.

Most visits take place in the doctor's office. Two out of three visits, or 66 per cent, occur in the office, 10 per cent at home, and 14 per cent in an outpatient clinic of a hospital, industrial health unit, or other location. About 10 per cent of all visits were telephone consultations.

As for the purpose of the visit, 75 per cent were for diagnosis and/or treatment of an illness or injury. Eight per cent were for general check-ups and seven per cent were for immunizations.

Going by region, residents of the West and Northeast consult doctors more frequently than persons living in the Midwest or South. The average number of physician visits in the West is 5.7 per person a year, in the Northeast 5.4, and in both the Midwest and South 4.7.

The educational attainment of the head of the family and the amount of family income had a direct bearing on the rate of physician visits.

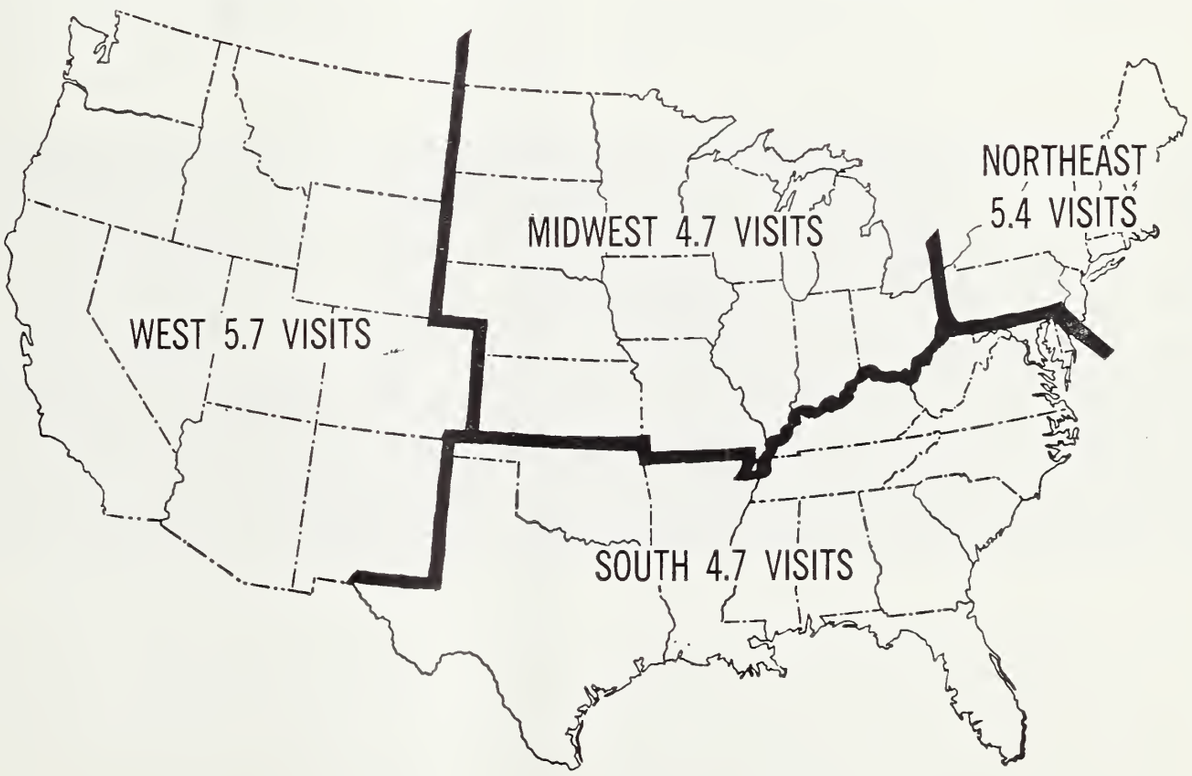
Where the head of the family had less than five years of education, the average number of physician visits was 4.3 per person a year while families in which the head of the family had attended college had an average rate of 6.0 visits per person a year.

Members of families having incomes under $2,000 had a rate of 4.6 physician visits per person a year compared with 5.7 visits for persons in families earning $7,000 or more.

The average city dweller consults his doctor more frequently than the average farmer. The urbanite has physician visits at the rate of 5.3 a year compared to the farmer's 3.8.

Women averaged a greater number of physician visits than men, 5.6 a year to 4.4. Boys under age 15 saw doctors more frequently than girls but females led in all age brackets starting at age 15.

NUMBER OF PHYSICIAN VISITS A PERSON PER YEAR BY REGION



SOURCE: U. S. Dept of Health, Education and Welfare.

Journal MSMA Fetes Medical Librarians

MSMA staffers, Charles L. Mathews and Rowland B. Kennedy, welcome members of the Southern Regional Group of the Medical Library Association at their meeting October 20. Journal MSMA gave a welcoming reception for the librarians before the official opening of the two day meeting. From left to right the group includes, Mr. Mathews, Mrs. Carol L. Robinson, University of Mississippi School of Medicine Library; Miss Louise Williams, State Board of Health Library; Mrs. Ruth W. Baxter, Veterans Administration Library and secretary-treasurer of the Southern Regional Group; Mrs. Ann Azordegan, University of Mississippi School of Medicine Library; Mrs. Martha S. Howard, Veterans Administration Library, and Mr. Kennedy.

Simmons Invites MSMA to Mid-South

The president of the Mid-South Postgraduate Medical Assembly, Dr. Omar Simmons, Newton, has issued an invitation to association members to attend the February 14-17, 1961, conclave at Memphis. In a recent statement, Dr. Simmons said that ". . . the indications are now that the scientific part of the program as well as the entertainment part will be equal to if not the best we have ever had."

Advance information indicates that the 70-odd year old organization of Arkansas, Mississippi, and Tennessee physicians will present a scientific program of more than twenty essays. It is affiliated with the Memphis and Shelby County Medical Society and its official publication, the *Memphis and Mid-South Medical Journal.*

Dr. Simmons added, "I would like to encourage the medical profession to continue their help in the fields of research into the etiology and treatment of the many human ailments including mental illnesses.

"It has been very gratifying," he continued, "to observe the continued interest in the fields of medical research. In fact, it appears that the interest is increasing instead of decreasing, as in areas of state or socialized medicine."

A and R Foundation Sets Scientific Plan

Twelve Mississippi physicians mapped an action program for the Mississippi Chapter of the Arthritis and Rheumatism Foundation when the Medical and Scientific Committee conducted its recent fall meeting. Dr. A. Gayden Ward, Jackson, is chairman.

Foundation spokesmen said that the basic objectives of the organization include provision of facilities to assist the private physician in treating patients with arthritis and rheumatism. Program publicity intended for public education is released in the name of the committee and not from individual physicians. A further policy of the committee is to encourage members to request local committees appointed by component medical societies.

Professional education is another foundation objective, the committee said. Present plans include scientific seminars and offers of speakers to medical groups. Organization officials said they will concentrate a fight on the sale of useless nostrums, cultism, and quackery which drains an estimated $3.5 million from Mississippians with arthritis and rheumatism annually. The committee is interested in expanding physical therapy services through training additional professional personnel.

ACOG Has New Medical Director

Dr. Robert A. Kimbrough, Jr., Philadelphia, Pa., has assumed duties in the newly created post of medical director of the American College of Obstetricians and Gynecologists, Chicago.

Responsibility of the medical director will be to lead and coordinate the activities of the college and of its committees relating to medical problems and policies, according to Donald F. Richardson, executive secretary, who will continue to head the college's administrative program.

Dr. Kimbrough brings a wide background to the college. He has been active in the college

since its founding nine years ago and was its third president in 1953. He is a consultant in gynecology and obstetrics to the Surgeon General of the United States Army. For several years he was vice-president of the American Board of Obstetrics and Gynecology, national certifying board for specialists in that field.

Before assuming his new duties in Chicago, Dr. Kimbrough was in active practice in Philadelphia, Pa., where he was director of the division of obstetrics and gynecology at the Pennsylvania Hospital. He was professor of obstetrics and gynecology at the schools of medicine, University of Pennsylvania, and chairman of the department of obstetrics and gynecology at the graduate school of medicine. He was consulting gynecologist to the Graduate Hospital, Wills Eye Hospital and Chester County Hospital, all in the Philadelphia area.

Ob-Gyn Board Sets Part I Exams

The American Board of Obstetrics and Gynecology has announced that Part I examinations will be conducted in certain principal cities of the United States and at certain military installations outside the continental limits on Friday, Jan. 13, 1961.

Dr. Robert L. Faulkner, Cleveland, Ohio, executive secretary of the board, said that reopened candidates will be required to submit case reports for review within 30 days after notification of eligibility. Scheduled candidates for Part I examinations are required to submit their 20 case abstracts in order to complete their examinations.

Mercy Hospital Nurses' Dorm Dedicated

Several hundred persons attended the dedication of the new Mercy Hospital-Street Memorial School of Nursing dormitory in Vicksburg on Oct. 11.

Speakers were Foster Fowler, executive director, Mississippi Commission on Hospital Care; Most Rev. R. O. Gerow, Bishop, Natchez-Jackson Diocese; Dr. A. Street, senior member, Street Clinic; Mother M. Hildegarde, administrator, Sisters of Mercy; and Mayor John D. Holland.

"Another milestone in the life of a great institution," speakers said of the dormitory which gives to the hospital unit complete facilities for housing and instructing the nursing students.

The nurses' dormitory is the result of an urgent need, Dr. Street said. He pointed to the shortage of trained nurses and the expanded requirement in equipment and personnel necessary to train students in the nursing profession today.

The new School of Nursing dormitory built for $350,000 was financed through the joint efforts of the Mississippi State Hospital Care Commission and a local committee.

A total of $225,000 was contributed from state and federal funds and the remaining necessary money is being raised by the general solicitation of gifts.

Technicians at the University of Mississippi School of Medicine pose for JOURNAL MSMA *in the studio and camera room of the closed circuit TV system. Picture 1 shows the studio for psychiatric interviews. "Hidden" features include microphone in lamp on desk and extra lighting for cameras furnished by tall lamps in the background. The telephone is a direct line to the lecture room upstairs where three monitors receive the transmission from the studio. TV cameras (picture 2) are hidden by one-way glass in a modified bookcase directly in front of interview participants. The control panel is shown in picture 3. Installed in January, 1960, the closed circuit channel is under the supervision of the Department of Psychiatry. Highly versatile, the equipment is used for teaching a variety of techniques and skills ranging from the psychiatric interview to the handling of cardiac arrest.*

PERSONALS

LAMAR ARRINGTON, Meridian, has been appointed by Senator John F. Kennedy to his Natural Resources Advisory Committee.

W. J. AYCOCK, Calhoun City, was awarded a fifty-year medal by the Calhoun City Masonic Lodge.

DONALD R. BERRY, Picayune, has been elected president of the medical staff at Crosby Memorial Hospital, succeeding W. W. Oser. Other officers are Samual O. Massey, vice president, and G. B. Stewart, secretary-treasurer.

WILLIAM R. EURE, Bay Springs, has been elected president of the Bay Springs Chamber of Commerce.

R. L. FORMAN was re-elected president of the Coahoma County Hospital medical staff in the annual election of officers. Other new officers are Robert Ray McGee, vice president, and Van Burnham, Jr., secretary. R. Rubisoff, Donald Ellis, and S. C. Leist were named to the executive committee.

B. L. HAMMACK has joined the Flowers-McCharen Clinic in West Point.

ESTELLE A. MAGIERA, director of the Child Guidance Center of the State Board of Health, presided over the women physicians from 16 southern states when they met in St. Louis Oct. 30 for their annual conference preceding the meeting of the Southern Medical Association. Dr. Magiera is chairman of SMA Women Physicians, an office she previously held in 1949.

GEORGE D. PURVIS has been named president of the medical staff of the Baptist Hospital in Jackson. Other officers are W. C. Warner, vice president, and William B. Wiener, secretary.

LESLIE V. RUSH presented two illustrated lectures in Mexico City recently. One, given at the University of Mexico, concerned the medullary fixation of fractures of the wrist, thigh, and leg. The other was an instructional course given by Dr. Rush before members of the American Fracture Association. Delegates to this group are from North, South, and Central America.

A. J. SANTANGELO, Jackson, has announced the opening of offices for the practice of neuropsychiatry.

A. W. ST. CLAIR directed the 1960 Diabetes Detection Drive in Jackson during Diabetes Week, November 13 through 19. He was appointed by W. A. Smithson, president of Central Medical Society, sponsors of the drive. S. H. McDonnieal, Ben P. Folk, J. Roy Bane, and Elmo Walker assisted in the Jackson campaign.

RICHMOND SHARBROUGH has joined the staff of the Vicksburg Mercy Hospital-Street Clinic as anesthesiologist.

EUGENE G. WOOD, JR., Jackson, has announced the opening of his offices for the general practice of medicine.

DEATHS

HYDE, WILLIAM BERRY, Durant. M.D., Chicago College of Medicine and Surgery, Chicago, Ill., 1915; local surgeon for the Illinois Central Railroad for 42 years and district surgeon since 1942; received a citation from President Franklin D. Roosevelt for outstanding contribution of service and local medical work during World War II; died at Holmes County Hospital, Lexington, Oct. 1, 1960, aged 75.

SMITH, JOHN ALEXANDER, Carmichael. M.D., Medical College of Alabama, Birmingham, 1911; died Oct. 14, 1960, aged 74.

SMITH, ROBERT WILLIAM, Canton. M.D., University of Pennsylvania School of Medicine, Philadelphia, 1920; interned Methodist Hospital, Philadelphia; Colonel, U. S. Army, five years; one of the founders of King's Daughters Hospital, Canton, and chairman of its Board of Directors; died at King's Daughters Hospital, Canton, Oct. 10, 1960, aged 66.

WALLACE, GEORGE WALTON, Biloxi. M.D., Tulane University School of Medicine, New Orleans, 1906; former superintendent of Touro Infirmary, New Orleans; past president of the Mississippi Chapter of the American College of Surgeons; received a citation from the Medical College of England; emeritus member of MSMA; member of Fifty Year Club; died Oct. 31, 1960, aged 86.

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Acad.—Academy
Am.—American
A.—Association
Coll.—College
Commn.—Commission
Comm.—Committee
Conf.—Conference
Cong.—Congress
Dist.—District
Div.—Division
Found.—Foundation
Hosp.—Hospital
Indust.—Industrial
Inst.—Institute
Internat.—International
M.—Medical
Med.—Medicine
Nat.—National
Pharm.—Pharmaceutical
Phys.—Physicians
Soc.—Society
Surg.—Surgery
Surgs.—Surgeons
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WW II Medical History Is Now Available

Fifteen of 48 volumes of "History of the Medical Department, U. S. Army, in World War II" have been published and are available to physicians, hospitals, medical libraries, and schools. The project is being conducted under the supervision of Lieutenant General Leonard D. Heaton, The Surgeon General, U. S. Army, by the Historical Unit of the army medical service.

General Heaton emphasized recently that the medical history of World War I did not fulfill its potential usefulness because of lack of distribution and poor publicity. As a result, medical personnel during World War II and the Korean War, largely unaware of the existence of the history, had to learn the hard way the useful lessons it contained. The principal endeavor is to prevent recurrence of this situation in the unhappy event of another national emergency.

Now available to the medical profession, the 15 volumes of World War II history cover most fields of surgery including general surgery, neurosurgery, orthopaedic surgery, and hand surgery. Other works are on physiologic effects of wounds, cold injury, communicable diseases, and related topics. The set of 15 volumes is available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., for $66.50 complete. Individual volumes range from $3 to $5.50 each.

Detailed information is available from the Historical Unit, U. S. Army Medical Service, Walter Reed Army Medical Center, Washington 12, D. C.

Union Health Plans Cover Mothers' Care, Income

Most health insurance plans for union members cover maternity care for working mothers as well as some or all of her income during absence from the job. This new twist in collectively bargained insurance programs was reported by the Department of Labor following a study of 300 union programs covering almost five million workers.

Of these 300 plans, 168 provided benefits for income lost due to pregnancy with 162 paying weekly benefits and six providing lump sum payments. In practically all instances, extra-pay aspects of the plans were limited to six weeks and ranged from flat amounts of $30 to $35 weekly.

Three-dimensional drawing showing microscopic view of hepatic cells.

what goes on in the liver?

A multitude of physiological processes . . .

Most frequently observed lump sum figure was $150.

Nearly every plan provides for hospital care during delivery and half of the programs did not limit the hospital stay. The Labor Department review included 40 per cent of all American workers under insurance plans obtained through collective bargaining.

HOPE Launches Care Program

Fifty-two of the nation's leading prescription drug manufacturers have contributed in excess of $780,000 in products and cash to Project HOPE, according to Dr. William B. Walsh, president of the People-to-People Health Foundations, sponsor of the project. Over $100,000 of the companies' contributions were in cash. Product values were computed according to manufacturers' wholesale prices.

The donations, coordinated by the Pharmaceutical Manufacturers Association, came from PMA member companies.

"The support of the member companies of PMA has earned the unending gratitude of the people of Indonesia and Vietnam." Dr. Walsh said, "And it serves as an example of enlightened generosity to our own fellow citizens. This response has earned the deepest gratitude of all of us connected with Project HOPE."

A part of President Eisenhower's People-to-People program, Project HOPE sent a 15,000 ton hospital ship, the S.S. Hope I, to Southeast Asia in September, Staffed with American doctors, nurses, and medical technicians, the floating medical center will bring modern medical knowledge and techniques to the medical and health professions of newly developing countries throughout the world.

"As a non-government program, Project HOPE could only succeed with the cooperation and backing of all segments of American society," Dr. Walsh said. "The response of the American drug industry, many other industries, businesses, and groups, American labor, and the American public is proof that our confidence in the conscience of America was warranted."

Physicians in federal service have increased 23.1 per cent in two years from 13,518 in 1956 to 16,641 in 1958. Nearly 50 per cent or 7,549 are general practitioners.

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